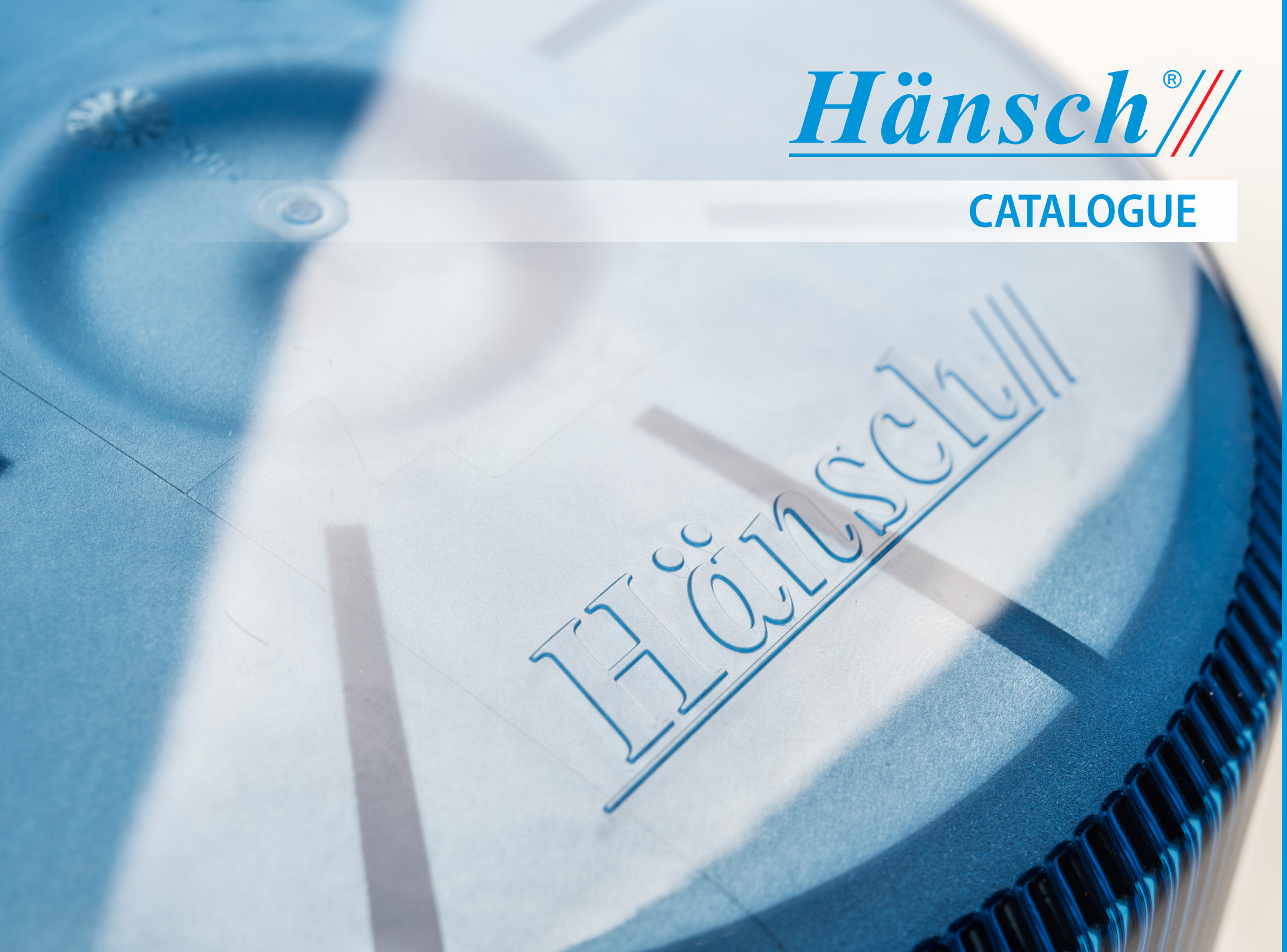
Hänsch®

# CATALOGUE




ENGLISH

# Table of contents

## Enquiries/Orders

Please send your enquiries and orders to the following e-mail address:
sales@fg-haensch.de

## Help us protect the environment:

We will be happy to send invoices in electronic format as PDF files.
Please send us a brief e-mail with the information to:
sales@fg-haensch.de

## Additional information

Working lights
**www.fg-haensch.com/workinglights**

Amber products
**www.fg-haensch.com**

Article numbers and prices can be found in our price list.





Hänsch®

# LED beacons

# LED beacons

- **Efficient**
- **Powerful**
- **Flexible**
- **Long-lasting**

Our versatile LED beacons can be flexibly used for every application. A variety of mounting options and sizes allow mounting on any kind of vehicle. Long-lasting, low power consumption and high electromagnetic compatibility characterise our LED beacons.

## Size comparison

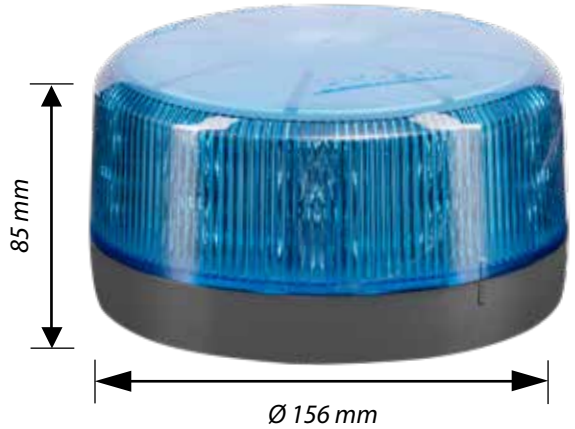
**COMET S / SR** **COMET** **SATURN** **NOVA** **MOVIA - SL**



Hänsch®

# COMET SR

Our COMET SR is impressive, not only because of its modern thin profile, but also because of the highest possible geometric visibility and warning effect from the rotating light (homologated according to ECE-R 65). Whenever rotating lights are required, our COMET SR is the best solution for police and fire brigade vehicles for keeping both site and workers safe.




## PRODUCT FEATURES:

- compact plastic housing
- two rows of LEDs provide a high warning effect
- flash pattern: possible to switch between rotating light and strobe light (analogue)
- function monitoring
- compensating wedge available for mounting on sloping surfaces
- options:
  - fix mounting or tube mounting
  - analogue or CiA447 versions
- colours: also available in amber

| ***Technical data:*** | |
|---|---|
| Designation: | COMET SR |
| Voltage: | 12 V / 24 V multivoltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 1,3 A / 24 V: 0,7 A |
| Material: | lamp dome: PC / socket: PBT-GF30 |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 5127 / TB2 (E1) 00 5157 |
| EMC according to ECE-R 10: | (E1) 10R-06 01 9004 |

## Overview of options

Whether fix mounting, tube mounting or magnetic fixing - the various versions of the LED beacon COMET S offer a solution for every requirement. Our COMET S has an impressively extra flat and modern design. Maximum light intensity (Class II homologation) and a fully lighted lamp dome ensure the best possible visibility and warning effect.

**Fix mounting**

**Magnetic fixing**

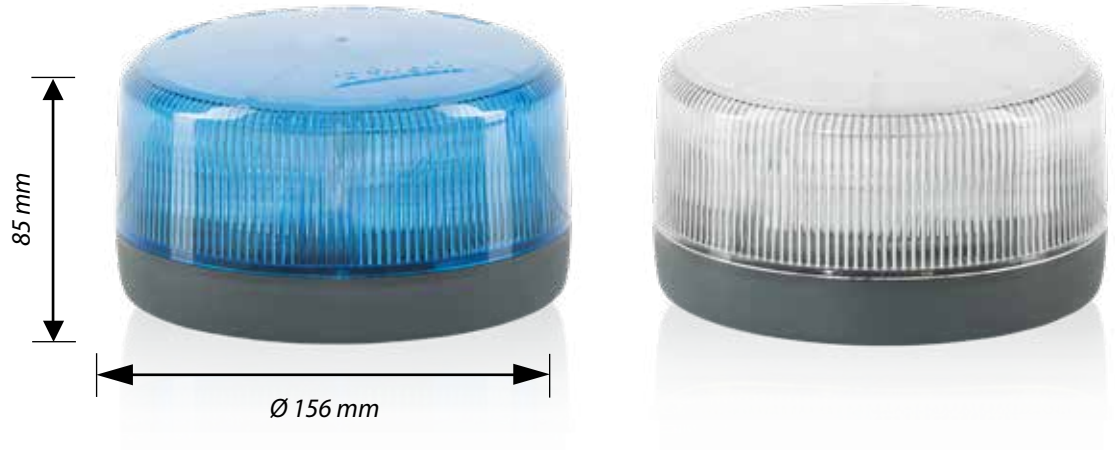
**Tube mounting**



Hänsch®

# COMET S

## Fix mounting




**Also available with examination in accordance with ICAO type C.**
**Further information can be found on page 107.**

## PRODUCT FEATURES:

- fix mounting in accordance with DIN 14620, form B1
- various homologated flash patterns integrated
- two rows of LEDs provide full-area illumination
- class II homologation
- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - convoy function
  - function monitoring (high)
  - analogue or CAN447 version
  - also available with clear lamp dome
  - soft light signal (night) possible
- colours: also available in amber, red and green

| ***Technical data:*** | |
|---|---|
| Designation: | COMET S |
| Voltage: | 9-32 V multi voltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 1.3 A / 24 V: 0.7 A |
| Material: | lamp dome: PC / socket: ASA |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 4425 |
| EMC according to ECE-R 10: | (E1) 10R-05 7965 |

## Magnetic fixing


### PRODUCT FEATURES:

- with spiral cable and triple magnetic fixing
- optimum adhesion  even on slightly curved vehicle roofs
- rubber-coated magnets to protect paintwork from scratches
- tested at up to 250 km/h
- choice of different plugs
- various homologated flash patterns integrated
- two rows of LEDs provide full-area illumination
- options:
  - day/night switching (via CAN447-cable)
  - day/night switching (automatic)
  - analogue or CAN447 version
  - also available with clear lamp dome
  - soft light signal (night) possible
- colours: also available in amber and red

## Tube mounting


### PRODUCT FEATURES:

- for fitting on a mounting tube in accordance with DIN 14620
- impact-resistant housing base
- various homologated flash patterns integrated
- two rows of LEDs provide full-area illumination
- options:
  - day/night switching (automatic)
  - flexible (AF) or fixed (A) tube
  - also available with clear lamp dome
  - soft light signal (night) possible
- colours: also available in amber and red

**Also available with examination in accordance with ICAO type C.**
**Further information can be found on page 107.**



Hänsch®

# COMET LED

## Overview of options

Whether fix mounting, tube mounting or magnetic fixing - the various versions of the COMET LED beacon offer a solution for every requirement. Our powerful LED technology with exceptional warning effect integrated in solid housing is what distinguishes our COMET LED beacons.

**Fix mounting**

**Magnetic fixing**

**Tube mounting**

## Fix mounting


### PRODUCT FEATURES:

- fix mounting in accordance with DIN 14620, form B1
- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - function monitoring (low or high)
  - analogue or CAN447 version
  - also available with clear lamp dome
- colours: also available in amber, red, green, blue/amber, red/green

## Magnetic fixing




*Metal elbow plug*

*Universal plug*

### PRODUCT FEATURES:

- with spiral cable and triple magnetic fixing
- optimum adhesion even on curved vehicle roofs
- rubber-coated magnets to protect paintwork from scratches
- tested at up to 250 km/h
- option:
  - also available with clear lamp dome
- colours: also available in amber, red, green and blue/amber

*Car plug*

**Also available with examination in accordance with ICAO type C. Further information can be found on page 107.**



Hänsch®

# COMET LED

## Tube mounting


## PRODUCT FEATURES:

- for fitting on a mounting tube in accordance with DIN 14620
- impact-resistant housing base
- options:
  - flexible (AF) or fixed (A) tube
- colours: also available in amber, green and red

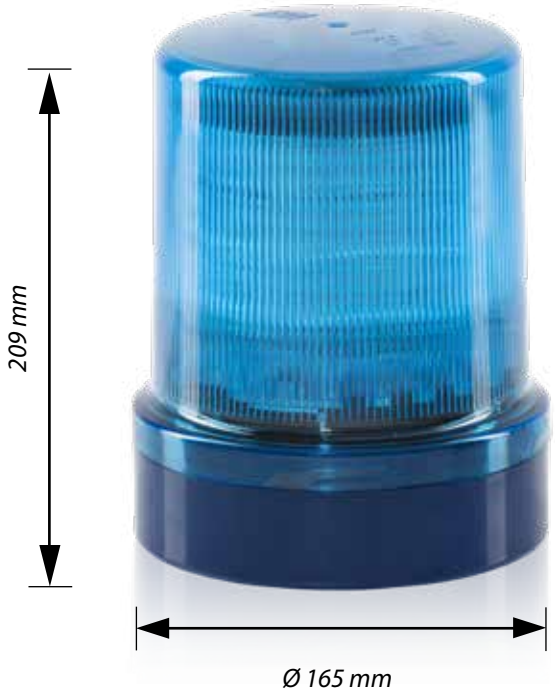
| ***Technical data:*** | |
|---|---|
| Designation: | COMET LED |
| Voltage: | 12 V / 24 V multi voltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 1.5 A / 24 V: 0.75 A |
| Material: | lamp dome: PC / socket: ASA |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB1 (E1) 00 2872 / TB2 (E1) 00 2814 |
| EMC according to ECE-R 10: | (E1) 10R-04 5669 |

**Also available with examination in accordance with ICAO type C.**
**Further information can be found on page 107.**

# SATURN LED

The SATURN LED beacon is available with either fix mounting or tube mounting options and can thus be used in a wide variety of applications. Powerful LED technology with exceptional warning effect in a compact housing is what distinguishes our SATURN LED beacons.

## Fix mounting




### PRODUCT FEATURES:

- fix mounting in accordance with DIN 14620, form B1
- function monitoring (low or high)
- colours: also available in amber and red

## Tube mounting


### PRODUCT FEATURES:

- for fitting on a mounting tube in accordance with DIN 14620
- impact-resistant housing base
- option:
  - flexible (AF) or fixed (A) tube
- colours: also available in amber and red

| *Technical data:* | |
|---|---|
| Designation: | SATURN LED |
| Voltage: | 12 V / 24 V multi voltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 1.5 A / 24 V: 0.75 A |
| Material: | lamp dome: PC / socket: ASA |
| Type of protection: | IP5K4K / IPX9K |

| *Homologation: (Germany and international)* | |
|---|---|
| Light according to ECE-R 65: | TB1 (E1) 00 3000 |
| EMC according to ECE-R 10: | (E1) 10R-04 5669 |

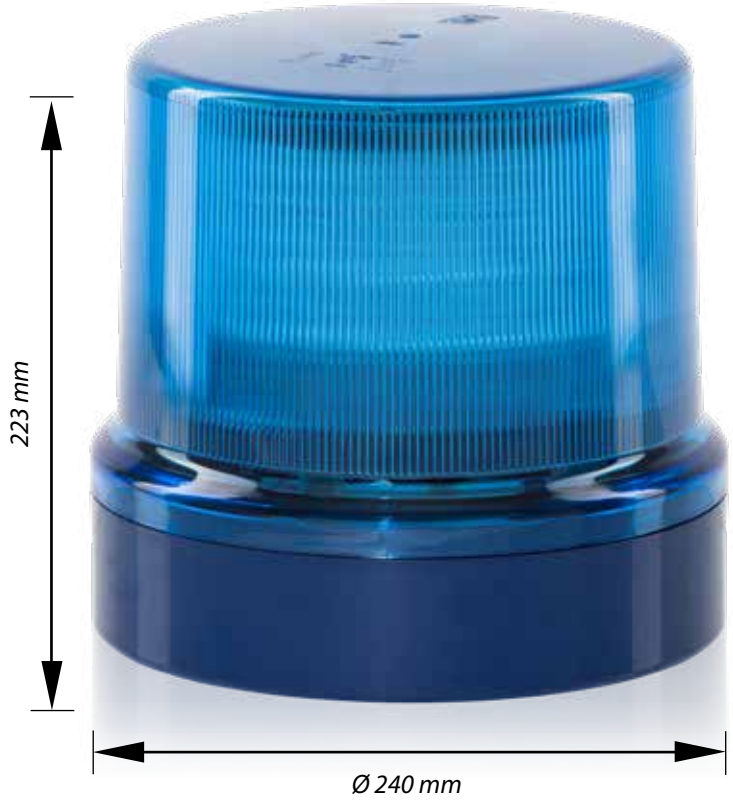


Hänsch®

# NOVA in LED technology

The NOVA in LED technology is the “big sister” of our beacons. Optimal light distribution is generated through the use of high-power LEDs. The NOVA in LED technology is most commonly used for large vehicles.

## Fix mounting




### PRODUCT FEATURES:

- fix mounting in accordance with DIN 14620, form B2
- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - function monitoring (low or high)
  - analogue or CAN447 version
- colours: also available in amber and red

| ***Technical data:*** | |
|---|---|
| Designation: | NOVA-L |
| Voltage: | 12 V / 24 V multi voltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 1.5 A / 24 V: 0.75 A |
| Material: | lamp dome: PC / socket: ASA |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB1 (E1) 00 2916 / TB2 (E1) 00 2917 |
| EMC according to ECE-R 10: | (E1) 10R-04 5669 |

# NOVA - L2

The NOVA-L2 (form B2) is the successor to our proven NOVA beacon. Instead of the 12 LEDs used so far, twice as many are now installed.
By using 24 high-power LEDs, up to 90% higher light values (averaged) are achieved.



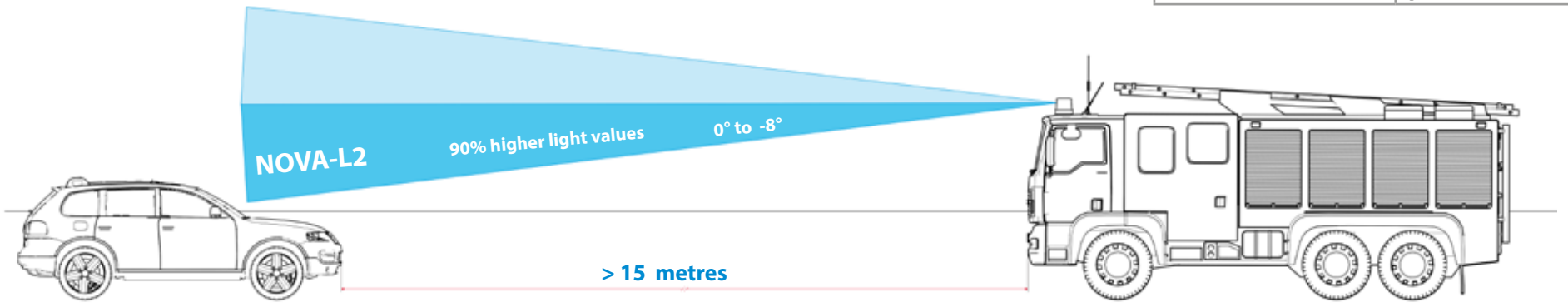
## PRODUCT FEATURES:

- fix mounting in accordance with DIN 14620, form B2
- flash pattern: double flash
- options:
  - day-/ night switching (via cable)
  - day-/ night switching (automatic)
  - function monitoring (low or high)
  - analogue or CiA447 version
  - additional flash patterns possible on request (analogue)
- colours: only available in blue

## INCREASED WARNING EFFECT IN ROAD TRAFFIC

The NOVA-L2, designed for 24V on-board voltage, is mainly used for large vehicles. A higher warning effect is achieved in all weather conditions (sunshine, rain, fog) and thus ensures more safety in road traffic. During the development, the proven Hänsch quality „Made in Germany" was relied upon. Besides the highest warning effect, the NOVA-L2 is above all characterised by its robustness and durability.

| ***Technical Data:*** | |
|---|---|
| Designation: | NOVA-L2 |
| Voltage: | 24 V |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 1,1 A |
| Material: | lamp dome: PC / socket: ASA |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 2917 |
| EMV according to ECE-R 10: | (E1) 10R-06 5669 |






Hänsch®

# MOVIA - SL

## Overview of options

Things have to go fast in an emergency. Beacons must be easy to use while driving, especially in the case of unmarked vehicles.  Due to its light weight and compact design, the MOVIA - SL offers the ideal conditions to arrive at the destination quick and safely.

**Fix mounting**

**Tube mounting**

**Magnetic fixing**

## Fix mounting


### PRODUCT FEATURES:

- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - function monitoring (high)
  - analogue or CAN447 version
  - also available with clear lamp dome
- colours: also available in red, amber and blue/amber

## Tube mounting


### PRODUCT FEATURES:

- for fitting on a mounting tube in accordance with DIN 14620
- flexible tube
- option:
  - also available on telescopic arm
- colours: also available in red and amber



Hänsch®

# MOVIA - SL

## Magnetic fixing




*Universal plug*

*Metal elbow plug*

*Protective cover*

*Car plug*

## PRODUCT FEATURES:

- LED beacon with spiral cable and triple magnetic fixing
- optimum adhesion even on curved vehicle roofs
- rubber-coated magnets to protect paintwork from scratches
- tested at up to 270 km/h
- options:
  - analogue or CAN447 version
  - also available with clear lamp dome
  - also available with day/night switching (automatic or with switch on the universal plug)
  - also available with extra strong magnets
  - also available with catching lug
  - also available with additional infrared LEDs
- colours: also available in amber, blue/amber and red
- protective cover available on request

| ***Technical data:*** | |
|---|---|
| Designation: | MOVIA - SL |
| Voltage: | 12 V / 24 V multi voltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 1.5 A / 24 V: 0.8 A |
| Material: | housing: aluminium / lamp dome: PC |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB1 (E1) 00 3139 / TB2 (E1) 00 3140 |
| EMC according to ECE-R 10: | (E1) 10R-04 5669 |

Hänsch®

# Bicoloured LED beacons

## can switch between blue and amber

The bicoloured beacons MOVIA - SL and COMET LED can be switched between blue and amber. The blue warning signal is used to clear a path on the way to the destination. The beacon can be switched to amber at the destination in order to act as a warning signal to secure the area.

*Fig. Movia - SL*

| ***Technical data:*** | | |
|---|---|---|
| Designation: | MOVIA - SL | COMET LED |
| Voltage: | 12 V / 24 V multi voltage | 12 V / 24 V multi voltage |
| Flash frequency: | > 2 Hz | > 2 Hz |
| Average power consumption: | 12 V: 1.5 A / 24 V: 0.8 A | 12 V: 1.5 A / 24 V: 0.75 A |
| Material: | housing: aluminium / lamp dome: PC | lamp dome: PC / socket: ASA |
| Type of protection: | IP5K4K / IPX9K | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | | |
| Light according to ECE-R 65: | TB1/TA1 (E1) 00 3139 / TB2 (E1) 00 3140 | TB1/TA1 (E1) 00 2872 / TB2 (E1) 00 2814 |
| EMC according to ECE-R 10: | (E1) 10R-04 5669 | (E1) 10R-04 5669 |

## MOVIA - SL and COMET LED OPTIONS

- fix mounting: colour switching via signal line
- magnetic fixing: colour switching via a switch on the universal plug



Hänsch®

# Bicoloured LED beacons

## can switch between blue and amber

### MOVIA - SL

**PRODUCT FEATURES:**

- available as fix mounting or magnetic fixing
- fix mounting/CAN447: colour switching via signal line
- magnetic fixing: colour switching via a switch on the universal plug
- clear lamp dome
- protective cover available on request

### COMET LED

**PRODUCT FEATURES:**

- available as fix mounting or magnetic fixing
- fix mounting/CAN447: colour switching via signal line
- magnetic fixing: Colour switching via a switch on the universal plug
- clear lamp dome

# COMET (S) on support bracket

This mounting form of the COMET and COMET S beacons has been specially developed for escort vehicles. The beacon is attached to the vehicle roof by means of a lockable hinge and a magnetic rubber suction cup. The universal electric plug-in hinge attachment part (ESA part) provides both a secure hold and voltage supply for the beacon.

## PRODUCT FEATURES COMET S:

- various homologated flash patterns integrated
- two rows of LEDs
- class II homologation
- analogue
- height: 85 mm (plus support bracket)
- colours: also available in red and amber

*Fig: COMET S on support bracket with ESA part*

## PRODUCT FEATURES COMET:

- three rows of LEDs
- class I homologation
- analogue
- height: 185 mm (plus support bracket)
- colours: also available in red and amber

*Fig: COMET on KLT without ESA part*

## PRODUCT FEATURES SUPPORT BRACKET:

- lockable clamping element
- self-contacting by multi-contact segments in the ESA part
- double protection with a plug-in hinge and a magnetic suction cup
- universal ESA part necessary



Hänsch®

# HT solutions

With the Hänsch HT solutions, you can provide the legally required geometric visibility even if the mounting of conventional beacons is not possible due to the structural conditions.

The HT solution, also referred to as a half beacon or semi-continuous bar, can be mounted on the front or rear of the vehicle or can be integrated into the vehicle body.

The various solutions from Hänsch, consisting of 2 to 6 lamp bodies, provide maximum flexibility in vehicle design. Through the HT solutions Sputnik mini and Sputnik SL the earliest possible warning effect when mounted at the front of the vehicle can be ensured e.g. in intersections or at exits.

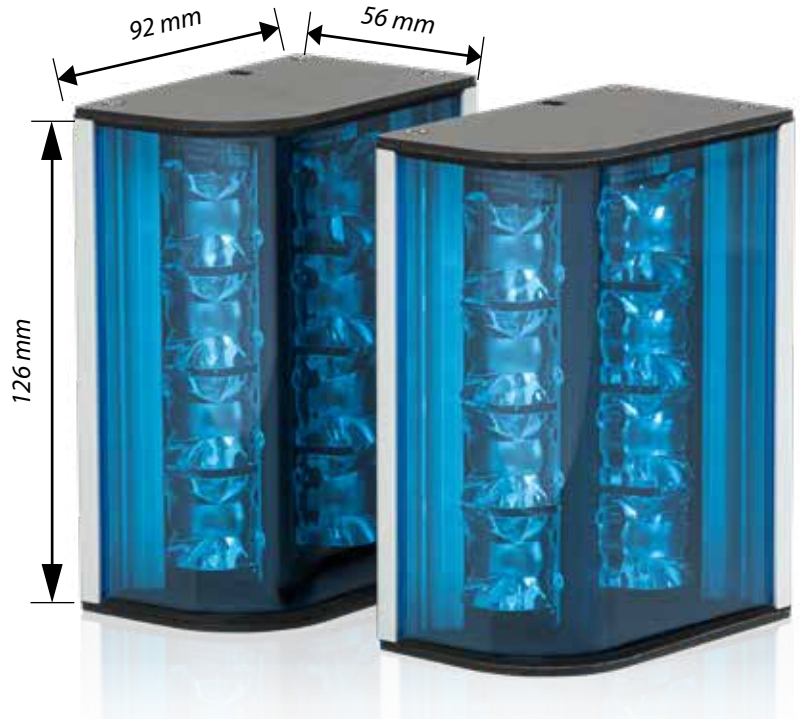
**INTEGRO Universal LED module**

**Sputnik mini HTB**

**Sputnik SL HTB**

# INTEGRO Universal LED module

To identify special-purpose vehicles in use, this flexible LED module with K2 homologation can be integrated into the roof structure at the front and rear. One module, two attachment variations: the compact solution provides an additional warning effect and increased safety in road traffic.




| *Homologation (Germany and international):* | |
|---|---|
| Light according to ECE-R 65: | HTB2 (E1) 00 3851 (blue) |
| EMC according to ECE-R 10: | (E1) 10R-05 4465 |

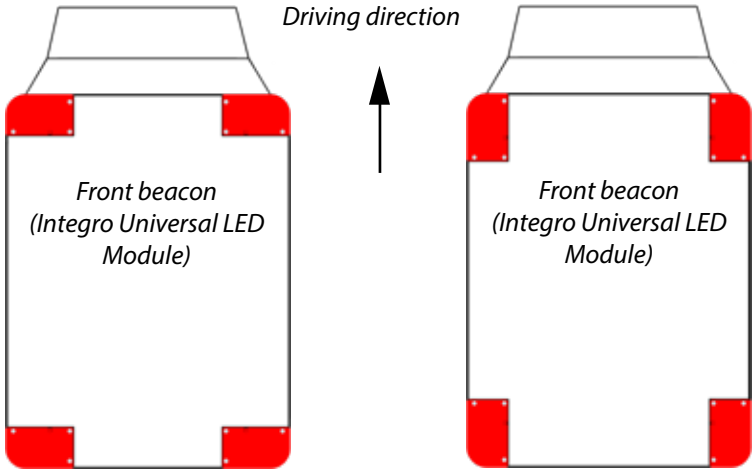
This product's certification is only valid if used pairwise in the front and/or the rear of the vehicle.

## PRODUCT FEATURES:

- one system consists of two identical lamp modules
- including day/night switching
- 8 high-power LEDs with wide angle lenses
- integrated control technology
- connection for function monitoring
- 270° angle of radiation
- synchronisation with several modules possible
- homologation as half beacon
- colours: also available in amber and red

## INTEGRATION OPTIONS:

- The LED modules can be attached at the front and/or rear of the special-purpose vehicle respectively in the roof fitting of the vehicle.
- A pair of Integro LED modules (front or rear) can be replaced by a beacon or a roof lightbar system.




*Integro Universal LED Module (long side of the module)*

*Integro Universal LED Module (short side of the module)*



Hänsch®

# Sputnik mini HTB

The new LED- warning device Sputnik mini impresses with its compact dimensions and the simple installation method in the round drill hole. With 2 lamp bodies the system can be used as front flasher. A HT solution is homologated with 6 Sputnik minis, whereby the lamp bodies in the middle can be replaced by special Sputnik SL or Sputnik Compact. The beacon as HT solution consists of several optical systems, therefore it is not a directional beacon (front flasher).

*Lamp body dimensions:*
*27 mm x 28 mm*
*(Diameter x height)*

## PRODUCT FEATURES:

- very compact design for universal use (front, rear, mirror **, wind deflector **, light pole **)
- housing: aluminium
- external electronics for up to 2 lamp bodies
- vehicle-specific HT solutions available: MB Sprinter, VW T6, further volume models or projects on request
- various areas of applications: homologation as directional beacon and as half beacon (functional beacons on request)

** First it must be clarified whether homologation has been granted by the relevant registration office.

## VARIATIONS:

1. HT system consisting of 6 lamp bodies Sputnik mini
2. HT system consisting of 4 lamp bodies Sputnik mini & 2 lamp bodies Sputnik SL (Y-cable for easy electrical connection available)
3. HT system consisting of 4 lamp bodies Sputnik mini & 2 lamp bodies Sputnik Compact (Y-cable for easy electrical connection available)

# Sputnik mini HTB

(1)

**System consists of:**

- 4 lamp bodies Sputnik mini with mounting ring (rubber)
- 2 lamp bodies Sputnik mini with mounting shell 10°

Voltage: 12 V / 24 V multi voltage
Flash pattern: synchronous

| ***Technical data:*** | | |
|---|---|---|
| Material | housing: | aluminium, black anodised |
| | cover glass: | PC |
| | electronics: | PA |
| Dimensions: | lamp body: | ø 27 mm / depth 28 mm |
| | electronics: | 95.5 x 26 x 13 mm (WxHxD) |
| Weight: | lamp body: | 25 g |
| | electronics: | 245 g |
| Type of protection: | IP6K7 / IPX9K | |
| Temperature range: | -40°C to +60°C | |
| Avg. power consumption*: | 0.8 A at 12 V<br>0.5 A at 24 V | |
| Peak*: | 2.3 A at 12 V<br>1.1 A at 24 V | |
| * electronics with 2 lamp bodies | | |
| Flash pattern: | strobe flash (configurable) | |
| ***Homologations: (Germany and international)*** | | |
| Light according to ECE-R 65: | HTB1 (E5) 00 064 (Ver.1)/HTB1 (E5) 00 066 (Ver.2)/HTB1 (E5) 00 067 (Ver.3) | |
| EMC according to ECE-R 10: | (E1) 10R-05 8617 | |

(2)

**System consists of:**

- 2 lamp bodies Sputnik SL
- 4 lamp bodies Sputnik mini with mounting shell 10°

Voltage: 12 V / 24 V multi voltage
Flash pattern: synchronous, alternating
Option:
activation control (only Sputnik SL)

(3)

**System consists of:**

- 2 lamp bodies Sputnik Compact
- 4 lamp bodies Sputnik mini with mounting shell 10°

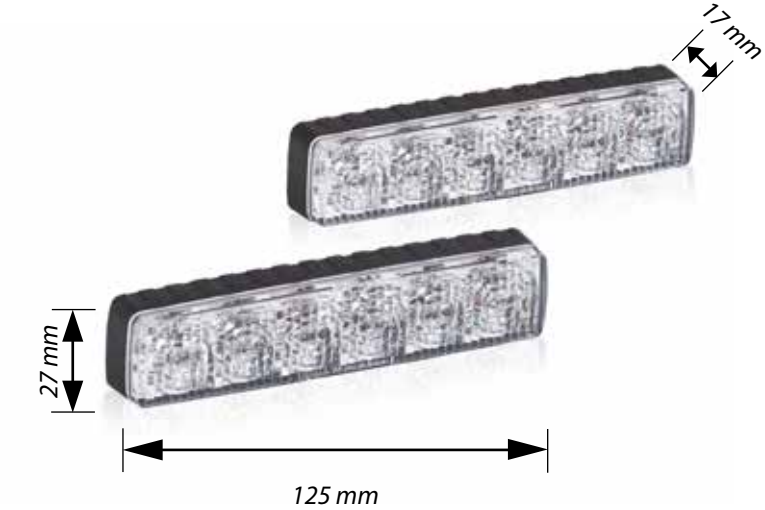
Voltage: 12 V / 24 V multi voltage
Flash pattern: synchronous, alternating



Hänsch®

# Sputnik SL HTB

The directional flasher Sputnik SL features state-of-the-art lighting technology. The cover glass and the integrated optics of the LEDs guarantee maximum light output and a large angle of radiation (horizontal > 70°). At intersections in particular, the light's wide beam considerably improves other road users' awareness, which reduces the risk of accidents.




## PRODUCT FEATURES:

- maximum warning effect > 500 candela
- two or more lamp bodies can be synchronised
- choice of different flash patterns
- can be adjusted to fit the contour of the radiator grille
- complete sealing of the lamp bodies ensure insensitivity to high pressure or steam jet cleaning
- universal holders and various vehicle-specific holders are available for optimal positioning and easy mounting
- Y-cable for easy electrical connection available

| ***Technical data:*** | |
|---|---|
| Designation: | Sputnik SL |
| Voltage: | 12 V / 24 V multi voltage |
| Average power consumption: | 12 V: 0.8 A (per lamp body)<br>24 V: 0.6 A (per lamp body) |
| Type of protection: | IP6K7 / IPX9K |
| ***Homologation:*** | |
| Light according to ECE-R 65: | HTB1 (E1) 00 4126 |
| EMC according to ECE-R 10: | (E1)10R-05 6845 |

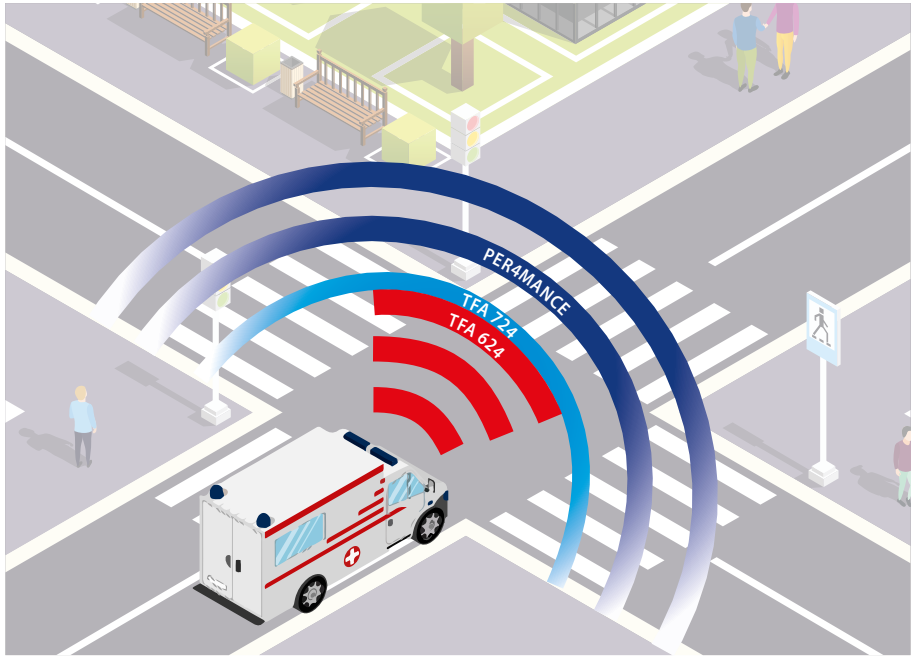

Feuerwehr 112

# TFA 724 & 744 Per4mance

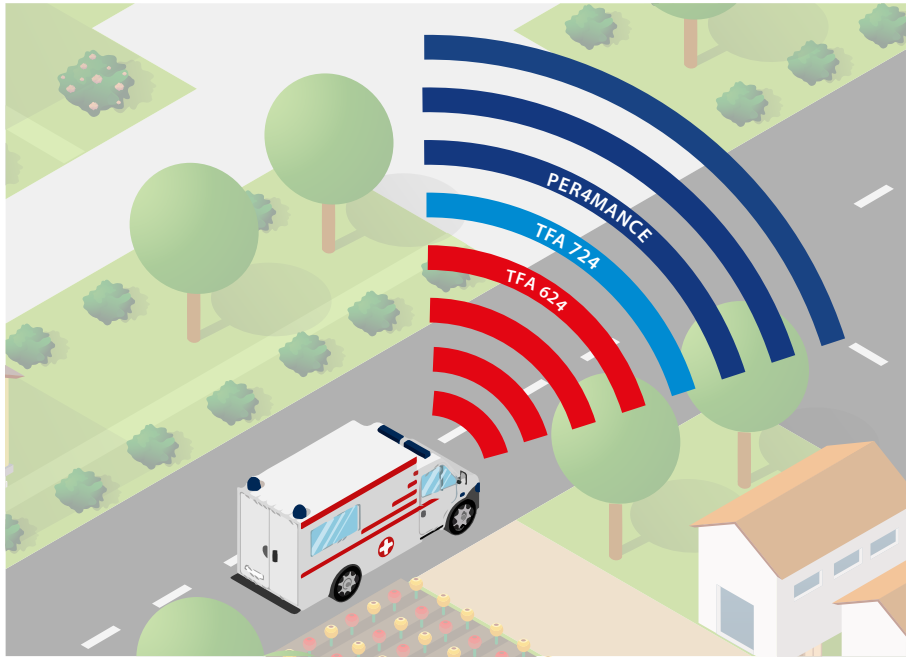
During emergency drives the acoustic signal is often perceived too late by other road users. The reason for this is the one-dimensional sound propagation in tone sequence systems. With the TFA 7xx, Hänsch is breaking a new ground. In addition to optimised sound propagation for urban (wide pressure mode) and rural (direct pressure mode), the Adaptive Sound Pressure Technology (ASP) also offers an extension option with increased range and intensity: the TFA 744 Per4mance.

## Variable urban / rural switching

### URBAN DRIVING – FOCUS PROPAGATION
Valuable in critical intersections




### RURAL DRIVING – FOCUS RANGE & INTENSITY
Acoustic road clearer

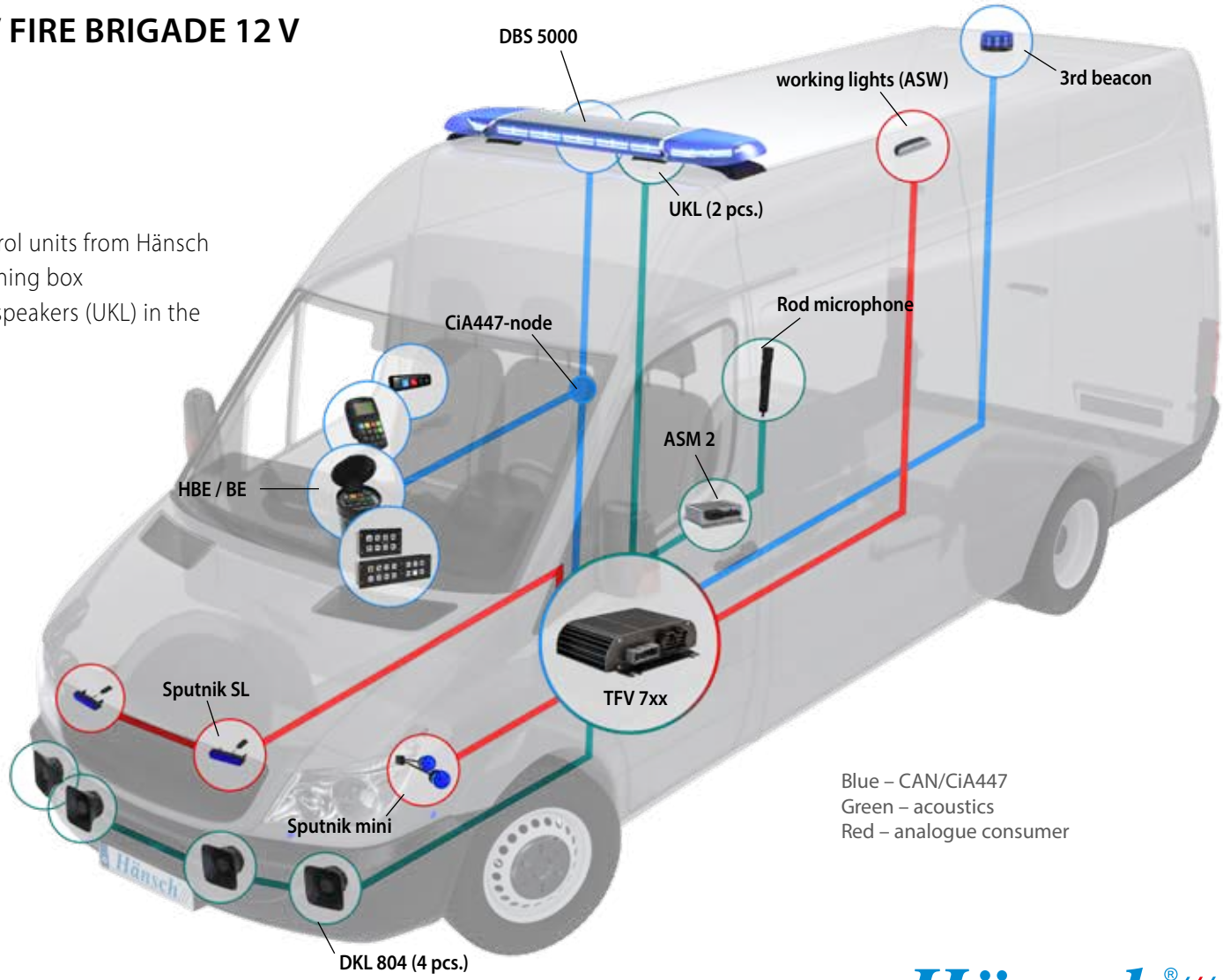


## Application example

### POLICE / RESCUE / AMBULANCE / FIRE BRIGADE 12 V

### ADVANTAGES:

- CAN447 compliant – controllable via digital control units from Hänsch
- variability of AF sources without additional switching box
- public address via additional undercarriage loudspeakers (UKL) in the lightbar (optional)




Blue – CAN/CiA447
Green – acoustics
Red – analogue consumer



Hänsch®

# TFA 724 & 744 Per4mance


## PRODUCT FEATURES:

- tone sequence amplifier with 1,2 or 4x DKL 604 or DKL 804 with various approved tone sequence signals including DIN urban/rural, compressor
- wide-angle urban signal with crossing effect
- optional: an additional output stage for voice output for up to 2 UKL or external DKL
- 2 switchable AF inputs
- CAN interface: can be integrated into the existing product family: control via e.g. HBE 300, BE 304, BE 308, BE 314, BE 312
- plug compatible with TFA 6xx
- loudspeaker function control
- 2x UDS-output 500 mA

| ***Technical data:*** | | |
|---|---|---|
| Designation: | TFA 714, TFA 724 und TFA 744 | |
| Voltage: | 12 V | |
| Average power consumption: | 3,5 A (bei TFA 724) | |
| Operating temperature range: | -40 °C bis +80 °C | |
| Alarm part: | • special signal according to DIN 14610<br>• integrated electronic compressor signal (from systems with at least 2 loudspeakers)<br>• takedown signal (YELP) adjustable (from systems with at least 2 loudspeakers)<br>• this function applies to DIN 14630 | |
| Designation: | Pressure chamber loudspeaker DKL 604 | Pressure chamber loudspeaker DKL 804 |
| Impedance: | 4 Ω | 4 Ω |
| Power rating: | 70 W | 70 W |
| Loudspeaker dimensions: | Ø 112 mm / depth: 71 mm | 145 mm x 145 mm / depth: 87 mm |
| Amplitier dimensions: | 180 mm / 47 mm/ 149 mm (BxHxT) | |
| Tone sequence signal: | • urban & rural signal (TA 32, DIN 14610)<br>• compressor sound (TA 32, DIN 14610)<br>• takedown signal (TA 32a)<br>• YELP, WAIL, HILO, AIRHORN<br>• AT-Ambulance, AT-Vienna Ambulance, AT-Police<br>• NL 2-tone | |
| ***Homologation: (Germany and international)*** | | |
| Acoustics according to TA32 and TA32a: | in preparation | |
| EMC according to ECE-R 10: | (E1) 10R-06 9243 | |
| **Additional homologated, foreign tone sequences on request.** | | |

# TFA 614/624 with DKL 604

The tone sequence system is designed as acoustic support to the light signals for emergency vehicles as defined in the road traffic licensing regulations. Piercing and clear high-efficiency special signals, as well as the option to use public address and electronic compressor signals, provide an extra dimension to the visual warning systems.

## TFA 614/624 with DKL 604 analogue version

## TFA 614/624 with DKL 604 CAN447 version

**TFA 614 with DKL 604** = tone sequence system with one pressure chamber loudspeaker 604
**TFA 624 with DKL 604** = tone sequence system with two pressure chamber loudspeakers 604


### PRODUCT FEATURES:

- highly efficient digital output stage
- because of its efficiency, the 624 tone sequence system is significantly louder than a typical 100 W tone sequence system
- integrated electronic compressor signal with homologation (TFA 624)
- special signal according to DIN 14610 with additional takedown signal (YELP) (TFA 624)
- internationally homologated tone sequences possible
- optimised for public address
- available in 12 V and 24 V
- analogue version: activation via individual switch, control units BE 200, BE 600 or hand-held control unit HBE Profi
- CAN447 version: activation via hand-held control unit HBE 300, HBE 304 or one of several mounting control units BE 300



Hänsch®

# TFA 614 / 624 with DKL 804

## TFA 614 / 624 with DKL 804 analogue version

TFA 614 with DKL 804 = tone sequence system with one pressure chamber loudspeaker 804
TFA 624 with DKL 804 = tone sequence system with two pressure chamber loudspeakers 804

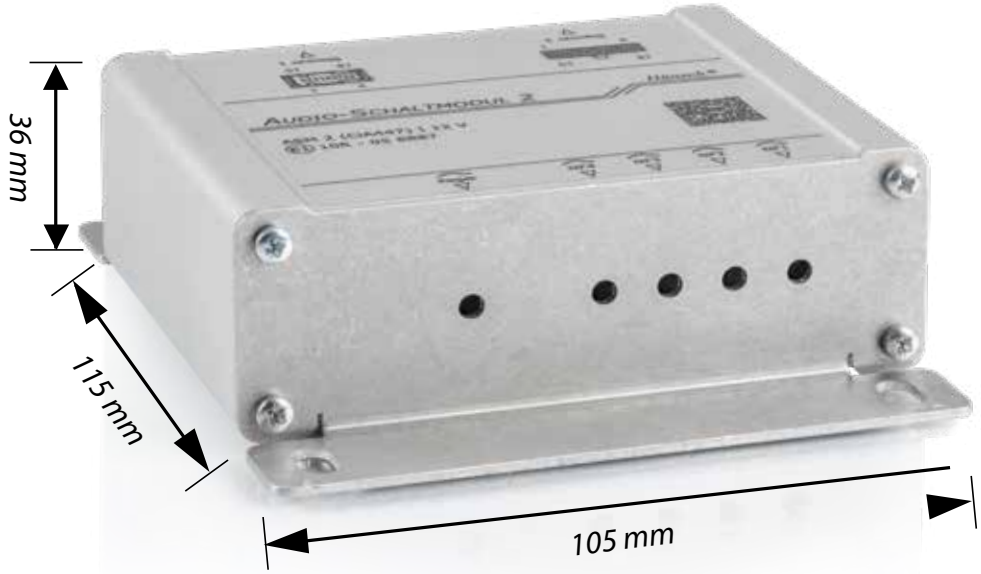

Compared to the DKL 604, the DKL 804 can reach up to 1.5 dB more per pressure chamber loudspeaker.

## TFA 614 / 624 with DKL 804 CAN447 version

| *Technical data:* | | |
|---|---|---|
| Designation: | Tone sequence amplifier 614 / 624 | |
| Voltage: | 12 V / 24 V | |
| Average power consumption: | 3.5 A (with TFA 624 12 V) | |
| Operating temperature range: | -40 ° C to +80° C | |
| Alarm part: | • special signal according to DIN 14610<br>• integrated electronic compressor signal (only with systems with 2 loudspeakers)<br>• takedown signal (YELP) adjustable (only with systems with 2 loudspeakers) | |
| Designation: | Pressure chamber loudspeaker DKL 604 | Pressure chamber loudspeaker DKL 804 |
| Impedance: | 4 Ω | 4 Ω |
| Power rating: | 70 W | 70 W |
| Loudspeaker dimensions: | Ø 112 mm / depth: 69 mm | 145 mm x 145 mm / depth: 87 mm |
| *Homologation: (Germany and international)* | | |
| Acoustics according to TA32 and TA32a: | ∿∿ W 25060 | |
| EMC according to ECE-R 10: | (E1) 10R-05 7535 | |
| Additional homologated, foreign tone sequences on request. | | |

# Audio switching module 2 (ASM 2)

Emergency personnel, security staff or public utility workers: all of them are sometimes tasked with informing and warning the public. This can be required in a disaster situation, in traffic or in general deployment situations. Usually, the only way to do so is a public address microphone which is connected to the exterior loudspeakers of a tone sequence system.
If additional audio or low-frequency sources are to be imported, other media such as MP3 players or cellphones are usually at hand. For these devices the ASM 2 is the interface to the tone sequence or amplifier for public address.
The audio sources are selected via a CAN447 compatible control unit, routed to the amplifier's audio frequency inputs from the ASM 2 and played through the pressure chamber loudspeakers. Additionally, the ASM 2 offers the option of a 10-second voice recording which can be played in a continuous loop or alternately with the tone sequence. The flexibility and quality of audio frequency signal processing are two more assets completing this product.




## FUNCTIONS:

- switching between up to 4 audio frequency signal sources + 2 PTT microphones
- source selection, recording/playing of voice announcements and volume control via CAN447 control unit
- activation of the audio frequency paths is either line-controlled or via automatic level detection

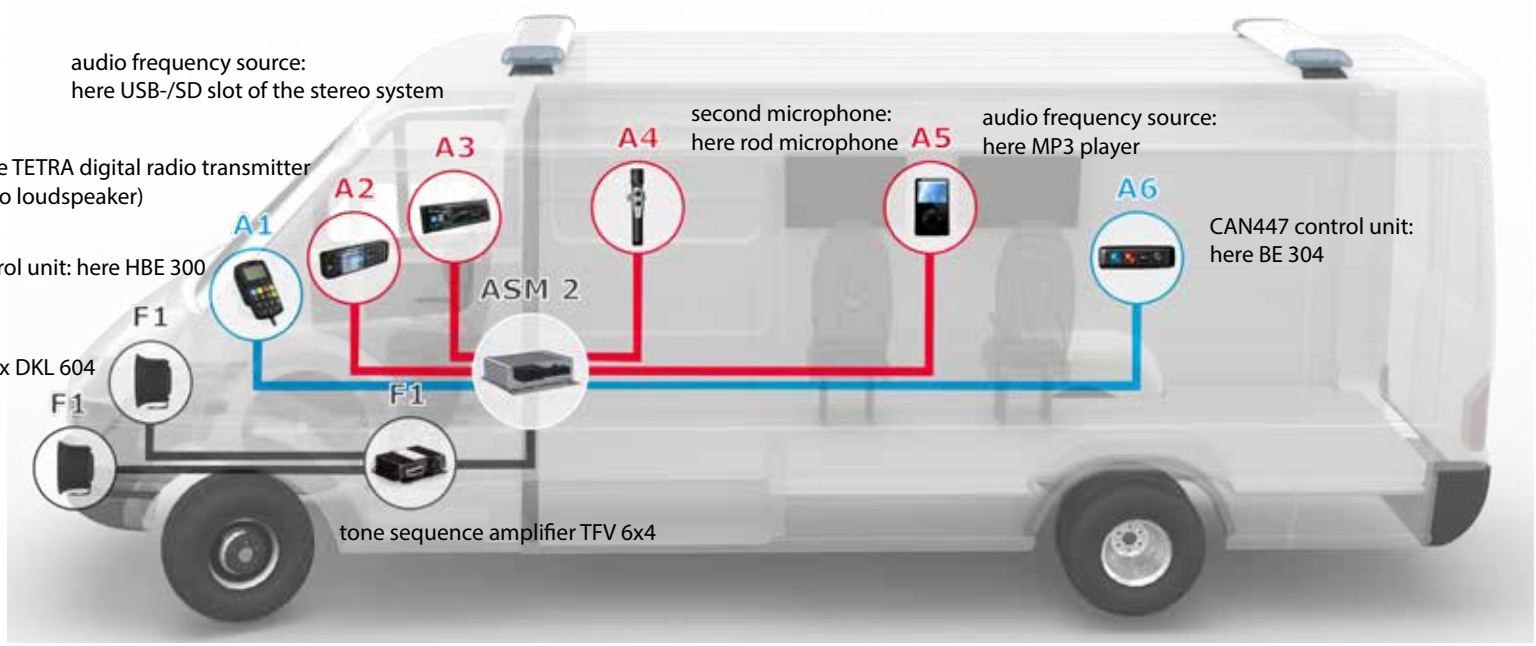
## PRODUCT FEATURES:

- CAN447 component
- use with TFV 6x4 12V/24V
- electrical connection available on the cable harness of the TFV 6x4, operation with HBE300 (integrated microphone + push-to-talk) or BE3xx + rod microphone
- tow mute outputs
- presetting the basic volume levels of the audio frequency sources on the unit



Hänsch®

# Audio switching module 2




## Possible applications in the command vehicle shown here:

**From the inside of the driver's cab:**

A1:

- command speaking
- recording voice announcements
- playing voice announcements
- playing voice announcements alternately with the tone sequence
- selecting the audio frequency sources or volume control via HBE 300

A2: selecting radio messages of the digital radio transmitter (may require additional devices) and transmitting them to the outside

A3: transmitting existing MP3 audio records to the outside

**From the radio communication station**

A4: command speaking

A5: transmitting existing MP3 audio records to the outside

A6: selecting audio frequency source or control volume via BE 304

**Functionality:**

F1: transmission to the outside by the amplifier 6x4 via the exterior loudspeaker(s) 604

| *Homologation: (Germany an international)* | |
|---|---|
| EMV nach ECE-R 10: | (E1) 10R-05 8887 |

## Great safety for all road users - particularly at intersections

The rapidly increasing volume of traffic is a considerable problem, especially for emergency vehicles when the usual warning devices are not noticed by the traffic ahead. For this reason, we advise the use of directional beacons as an add-on to the emergency vehicle's equipment. At intersections in particular, the light's wide beam considerably improves safety while attracting the road users' attention.

## Overview of options

**Sputnik SL & LED traffic advisor**

**Sputnik Compact**

**Sputnik mini**

**Sputnik nano mobil**



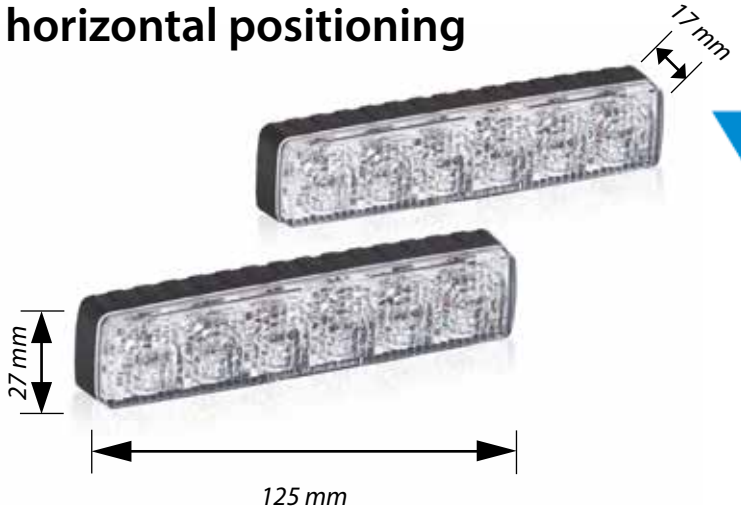
Hänsch®

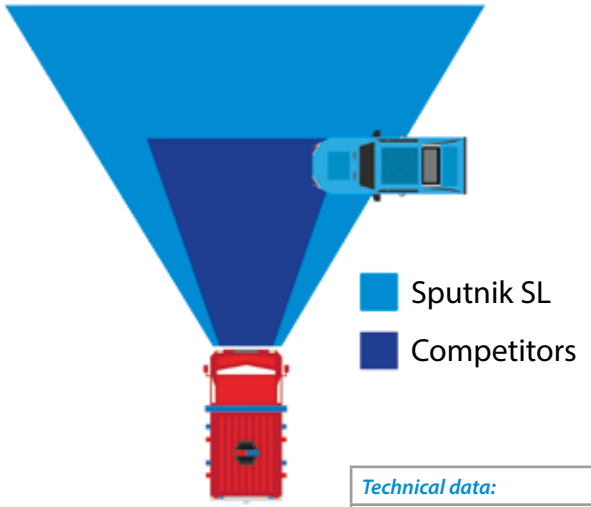
# Sputnik SL

The directional flasher Sputnik SL features state-of-the-art lighting technology. The cover glass and the integrated optics of the LEDs guarantee maximum light output and a large angle of radiation (horizontal > 70°). At intersections in particular, the light's wide beam considerably improves other road users' awareness, which reduces the risk of accidents.

# Sputnik SL

## horizontal positioning




## vertical positioning

## PRODUCT FEATURES:

- versions available for horizontal and vertical mounting
- maximum warning effect > 500 candela
- two or more lamp bodies can be synchronised
- choice of different flash patterns
- can be adjusted to fit the contour of the radiator grille
- complete sealing of the lamp bodies ensures insensitivity to high pressure or steam jet cleaning
- universal cable can be configured as a control cable, day/night cable or activation cable
- universal holder and various vehicle-specific holders available for optimal positioning and easy mounting
- Y-cable for easy electrical connection available
- also available in red, green, white and amber
- information on special HT solutions in combination with Sputnik mini can be found on page 22/23

| ***Technical data:*** | | |
|---|---|---|
| Designation: | Sputnik SL | |
| Voltage: | 12 V / 24 V multi voltage | |
| Average power consumption: | 12 V: 0.8 A (per LK)<br>24 V: 0.6 A (per LK) | |
| Type of protection: | IP6K7 / IPX9K | |
| ***Homologation:*** | | |
| Light according to ECE-R 65: | | |
| Horizontal | XB1 (E1) 00 3568 (blue) | XB2 (E1) 00 3569 (blue, cl. 2) |
| Vertical | XB1 (E1) 00 3756 (blue) | XB2 (E1) 00 3759 (blue, cl. 2) |
| **Our amber directional beacons Sputnik SL are homologated as rear warning systems according to §52, (11) StVZO.** | | |
| Light according to ECE-R 65: | | |
| Horizontal: | XA1 (E1) 00 3652 (amber) | |
| Vertical: | XA1 (E1) 00 3757 (amber) | |
| EMC according to ECE-R 10: | (E1) 10R-05 6845 | |



Hänsch®

# LED traffic advisor

The traffic advisor is optionally available with 4-7 lamp bodies. Through its amber light, the traffic advisor alerts subsequent traffic of dangers in all kinds of weather and visibility conditions.

## OPTIONS:

- installation optionally with 4-7 LED lamp bodies (amber)
- low power consumption (important for providing safety without being powered by a motor)

## Sputnik Compact

fig.: surface mounting

The control unit is not included in the scope of delivery.

| *Technical data:* | |
|---|---|
| Housing: | Zing die casting, coated |
| Cover glass: | PC |
| Protection class: | IP65 |
| Voltage: | 12 V / 24 V multi voltage |
| Avg. Power consumption: | 0,5 A at 12 V<br>0,3 A at 24 V |
| Permanent light | 0,55 A at 12 V<br>0,34 A at 24 V |
| *Homologation: (Germany and international)* | |
| EMC after ECE-R 10: | (E1) 10R-04 7591 |

Homologation as rear warning system; special approval for traffic advisor is required.

## Sputnik SL

The control unit is not included in the scope of delivery.

| *Technical data:* | |
|---|---|
| Housing: | Sputnik SL |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz |
| Avg. power consumption: | 12 V: 0.8 A (per LK) / 24 V: 0.6 A (per LK) |
| Type of protection: | IP6K7 / IPX9K |
| *Homologation: (Germany and international)* | |
| EMV nach ECE-R 10: | (E1) 10R-05 6845 |

# Sputnik Compact

The Sputnik Compact features state-of-the-art lighting technology. The cover glass and the integrated optics of the LEDs guarantee maximum light output and a large angle of radiation. The slim all-rounder Sputnik Compact offers a wide range of versatile applications.

## Overview of options:

### Surface mounting


### Rack mounting


* depth after mounting

### VARIATIONS:

- rack mounting and surface mounting options available
- rear warning beacon available with 0° or 0°-24° angle of radiation
- working light available with 0° or 0°-24° angle of radiation
- information on special HT solutions in combination with Sputnik mini can be found on page 22/23

### VERSATILE APPLICATIONS:

- rear warning beacon (blue) in the boot lid when lightbar is covered
- directional beacon with a main radiation direction, e.g. front flasher (blue), rear flasher (blue)
- rear warning system (§53a (3) StVZO) to secure a stationary vehicle to the rear (amber) (mounting in a vehicle)



Hänsch®

# Sputnik Compact

## OTHER OPTIONS:

- rear warning system according to §52 (11) StVZO to secure a stationary vehicle to the rear (amber)
- direction indicator/turning light and hazard warning light (amber)
- rear and brake light (red)
- fog tail light (red)
- lighting (white permanent light)
- also available in green

| ***Technical data:*** | | |
|---|---|---|
| Housing: | Zinc die casting, coated | |
| Diffuser: | PC | |
| Protection class: | IP65 | |
| Voltage: | 12 V / 24 V multi voltage | |
| Avg. power consumption: | 0.5 A at 12 V<br>0.3 A at 24 V | |
| Permanent light: | 0.55 A at 12 V<br>0.34 A at 24 V | |
| ***Homologation: (Germany and international)*** | | |
| Rear warning beacon: | TA13a (blue) | ∿∿ K 1158 / ∿∿ K 1159 |
| Directional beacon: | ECE-R 65 (blue) | XB1 (E1) 00 4111 |
| Rear warning system: | TA20 (amber) | ∿∿ K 1160 |
| Direction indicator/hazard warning light: | ECE-R6 (amber) | 01 2a (E1) 4109 |
| Rear/brake light: | ECE-R 7 (red) | 02 R1-S1 (E1) 4109 |
| Fog tail light: | ECE-R 38 (red) | 00 F1 (E1) 4109 |
| Rear warning system: | ECE-R 65 (amber) | XA1 (E1) 00 4110 |
| EMC: | ECE-R 10 | (E1) 10R-04 7591 |

Hänsch®

# Sputnik mini

The new LED warning device Sputnik mini impresses with its compact dimensions and simple mounting through a round drill hole.
With 2 lamp bodies the system can be used as front flasher.

*Lamp body dimensions:*
*27 mm x 28 mm*
*(Diameter x height)*

## PRODUCT FEATURES:

- highly compact design for universal usage
- housing: aluminium
- exterior electronics for up to 2 lamp bodies
- X-homologation
- also available in amber
- with 2 lamp bodies as front- and/or rear flasher usable

| ***Technical data:*** | | |
|---|---|---|
| Material: | Housing: | aluminium, black anodised |
| | Cover glass: | PC |
| | Electronics: | PA |
| Dimensions: | Lamp body: | ø 27 mm / depth 28 mm |
| | Electronics: | 95.5 x 26 x 13 mm (WxHxD) |
| Weight: | Lamp body: | 25 g |
| | Electronics: | 245 g |
| Type of protection: | IP6K7 / IPX9K | |
| Temperature range: | -40° C to +60° C | |
| Voltage: | 12 V / 24 V<br>multi voltage | |
| Avg. power consumption*: | 0.8 A at 12 V<br>0.5 A at 24 V | |
| Peak*: | 2.3 A at 12 V<br>1.1 A at 24 V | |
| * electronics with 2 lamp bodies | | |
| Flash pattern: | Strobe flash synchronous (configurable) | |
| ***Homologations: (Germany and international)*** | | |
| Light according to ECE-R 65: | XB1 (E5) 00 0068 (C1) / XB2 (E5) 00 0070 (C2) | |
| EMC according to ECE-R 10: | (E1) 10R-05 8617 | |



Hänsch®

# Sputnik nano mobil

The Sputnik nano mobil is an additional directional warning system which is placed behind the windscreen to provide the ideal supplement to the beacons on the vehicle's roof. It is especially suited for the use in unmarked vehicles.

*Universal plug*

*Metal elbow plug*

## PRODUCT FEATURES:

- entire electronics integrated into the lamp body
- powerful warning signal thanks to modern lens technology
- lamp bodies can be adjusted in various ways to optimally suit the angle of the windscreen
- comfortable fixing to the windscreen via two suction cups possible
- anti-glare thanks to the windscreen-fitted foam sealing
- power supply via universal plug or metal elbow plug
- protective cover available as accessory

| ***Technical data:*** | |
|---|---|
| Designation: | Sputnik nano mobil |
| Voltage: | 12 V / 24 V multi voltage |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V: 0.65 A / 24 V: 0.4 A |
| ***Homologation (blue): (Germany and international)*** | |
| Light according to ECE-R 65: | At present, there is still no homologation regulation for mobile, directional warning systems – special approval required |
| EMC according to Directive 72/245/EWG: | e1 03 4972 |




Hänsch®

# Lightbar systems

## Highest safety through perfection

Today, Hänsch lightbar systems are an essential piece of equipment for the police, fire brigade and rescue services' vehicles. A maximum warning effect is achieved by using the latest lighting technology, thus increasing safety for all traffic users. All lightbar systems are available in a variety of lengths and designs. They are modular and feature a wide range of functions.

reddot award 2017
winner

**DBS 5000**


reddot design award
winner 2013

**DBS 4000**

**DBS 2000/3000 LED**

**Divided DBS 975 LED**

# DBS 5000

Winner of the *reddot design award*, the DBS 5000 warning system combines modern design, a versatile range of functions and powerful LED lighting technology. The optimum warning effect attracts the attention of road users and ensures additional safety when in operation. The low-profile design not only ensures low air resistance and reduced noise, but also makes it possible to access destinations where clearance height is an issue.


reddot award 2017
winner

## Customisable
- fitted using a modular system
- easily adaptable to individual needs

## Aerodynamic housing
- low wind resistance and reduced noise levels
- low-profile design

## Variety of mounting options
- fast and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect
- state-of-the-art lighting technology
- automatic day/night switching

## Easy operation
- digital control via CAN447 or FireCAN
- converters for analogue control available

## Variety of lengths
- lengths: 700, 1100, 1200, 1400, 1600 or 1800 mm



Hänsch®

# DBS 5000

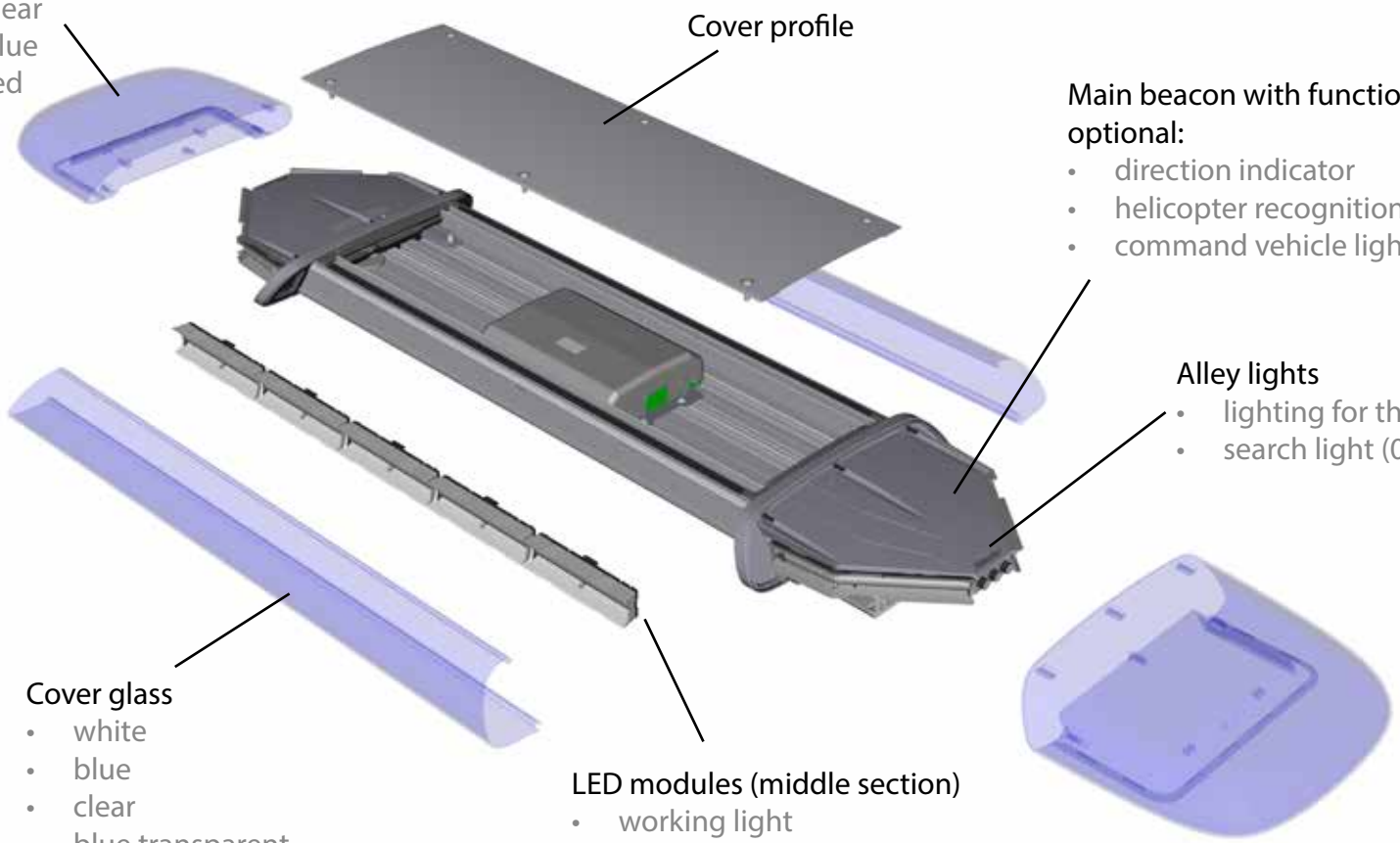
## RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter recognition)
- LED command vehicle light (GREEN)
- direction indicator (turning light)*
- day/night switching (automatic)
- working light
- undercarriage loudspeaker to support public address
- alley lights: 0° or 20° tilt
- additional flashers
- power flash
- rear warning system
- traffic advisor (special approval required)
- convoy function (control required)
- integration of compressor horns possible
- also available with clear lamp domes

*CAN447 requires an I/O-Box to feed in the signals

Also available with examination in accordance with ICAO type C.
Further information can be found on page 110/111.

| *Technical data:* | |
|---|---|
| Designation: | DBS 5000 |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz (beacon) |
| Average power consumption: | from 4 A (at 12 V) |
| Lengths: | 700, 1100, 1200, 1400, 1600, 1800 mm |
| Depth: | 285 mm |
| Height: | 63 mm |
| Weight: | from 5.1 kg |
| Material: | lamp dome: PC / cover glass: PMMA / housing: aluminium |
| Type of protection: | IP5K4K / IPX9K |
| *Homologation: (Germany and international)* | |
| Light according to ECE-R 65: | TB2 (E1) 00 4446 |
| EMC according to ECE-R 10: | (E1) 10R-05 7981 |
| Direction indicator: Light according to ECE-R 6: | 01 1 (E1) 4453 (front) / 01 2a (E1) 4453 (rear) |
| Rear warning system: Light according to ECE-R 65: | XA1 (E1) 00 4471 |
| Power flash: light according to TA13a: | ∿∿ K 1427 |


Lamp dome
• clear
• blue
• red
Cover profile
Main beacon with function monitoring, optional:
• direction indicator
• helicopter recognition
• command vehicle light
Alley lights
• lighting for the surrounding area (20°)
• search light (0°)
Cover glass
• white
• blue
• clear
• blue transparent
LED modules (middle section)
• working light
• additional flasher
• rear warning system
• power flash



Hänsch®

# DBS 5000

## Basic lightbar

| Possible lengths |
|---|
| 700, 1100, 1200, 1400, 1600, 1800 mm |

| Main beacon (HKL) | |
|---|---|
| Function | |
| Main beacon (blue) | • high-power LEDs with wide angle lenses<br>• class 2 homologation with automatic day/night switching<br>• integrated function monitoring<br>• flash pattern: strobe flash<br>• optional: signal light: command vehicle light green, fourfold on the main beacons (flashing)<br>• optional: helicopter recognition, fourfold, infrared rotating, for night vision devices<br>• optional: direction indicator, front and rear, in the main beacons*<br>• also available with clear lamp domes |

| Control module (KM) | |
|---|---|
| Function | |
| Digital control | • serial control by 2-wire cable for CAN447 control units (e.g. BE 300, HBE 300)<br>• compatibility of other control units on request |
| FireCAN | • serial control for FireCAN control units |
| Analogue control | • converters for analogue control available<br>• analogue control via signal line<br>• for limited range of functions (compatibility on request) |

| Roof mounting | | |
|---|---|---|
| Function | | |
|  | Rubber mouldings | • for flat or curved vehicle roofs |
|  | Mounting brackets | • universal and various vehicle-specific models available |

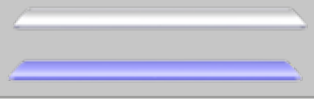
*CAN447 requires an I/O-Box to feed in the signals

| Electrical connection | |
|---|---|
| Function | |
| Cable outlet | • cable outlet, passenger side: standard<br>• cable outlet, driver side<br>• separate cable outlet (power supply and signal line are laid separately)<br>• vehicle-specific electrical connections on request |

# Options

| Acoustics | | |
|---|---|---|
| Function | | Possible for |
| Undercarriage loudspeaker | • undercarriage loudspeaker directed towards the rear and/or the front for public address<br>• external amplifier and cable harness required | • 12 V<br>• 24 V |
| Martin compressor system | • external Martin compressor with 4 diaphragm acoustic horns, mounted on the lightbar | • 12 V<br>• 24 V |

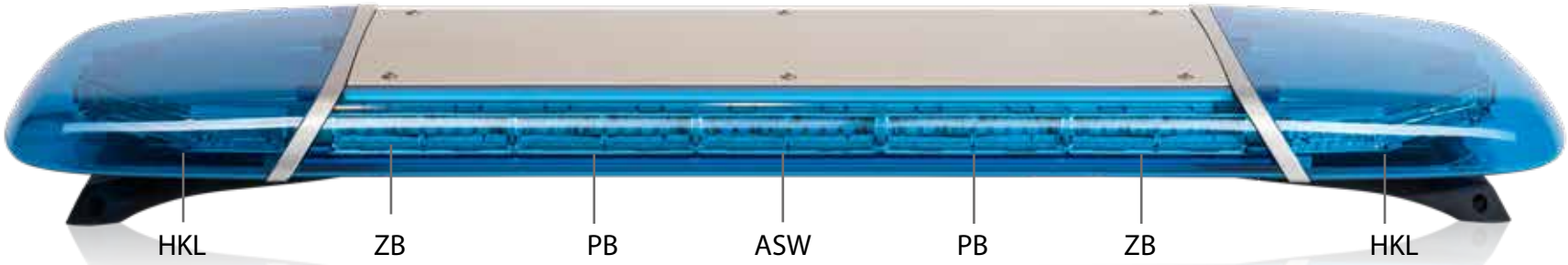
| Alley lights (side lights) | | | |
|---|---|---|---|
| Function | | | Possible for |
|  | Lighting for surrounding area | • colour: white<br>• tilt angle: 20°<br>• mounted in pairs (left and right) | • 12 V<br>• 24 V |
|  | Search lights | • colour: white<br>• without tilt angle<br>• mounted in pairs (left and right) | • 12 V<br>• 24 V |

| Cover glass | | |
|---|---|---|
| Description | | |
|  | Cover glass in full colour:<br>• white (RAL 9010)<br>• blue (RAL 5017) | |
|  | Cover glass, transparent:<br>• clear<br>• blue transparent | • clear or tinted transparent cover glass<br>• required when middle modules are mounted |

# Middle modules

## Options - front mounting

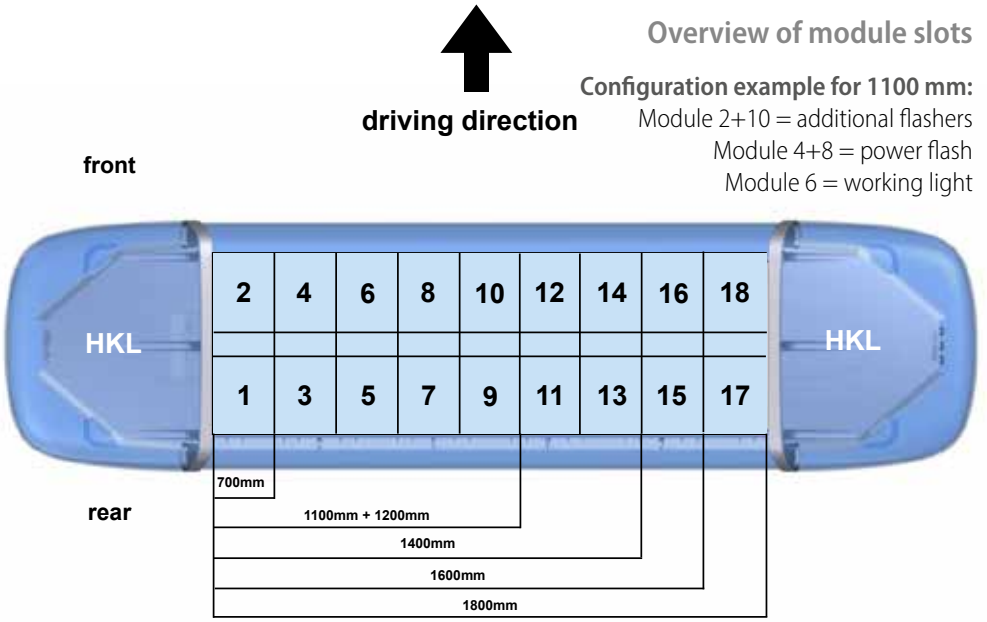
Configuration example




| Additional flasher (ZB), working light (ASW) and power flash (PB)* | |
|---|---|
| Function | |
| Additional flashers (pair) max. 3 pairs, depending on the length | • a module consists of 9 blue LEDs in the reflector housing<br>• directional<br>• synchronisation with respective main flasher<br>• reduced in night mode |
| Working light (0°) (up to 4 pcs. per lightbar) | • 9 white LEDs in the reflector housing<br>• selectable mounting position<br>• 1500 lumens |
| Power flash | • a module consists of 9 blue LEDs in the reflector housing<br>• directional<br>• optimised for distance effect |
| *max. 6 modules possible | |

Overview of module slots

**Configuration example for 1100 mm:**
Module 2+10 = additional flashers
Module 4+8 = power flash
Module 6 = working light



# Middle modules

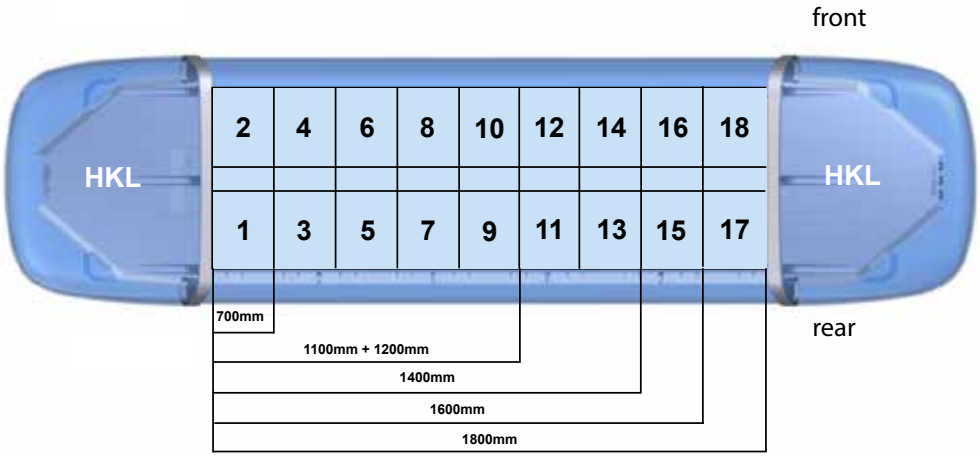
## Options - rear mounting

### Configuration example


### Overview of module slots

**Configuration example for 1100 mm:**
Module 1+9 = additional flashers
Module 3+7 = rear warning system
Module 5 = working light

**driving direction**




| Additional flasher (ZB), working light (ASW), rear warning system (HWS) * and traffic advisor (VLE) | |
|---|---|
| Function | |
| Additional flashers (pair)<br>max. 3 pairs, depending on the length | • a module consists of 9 blue LEDs in the reflector housing<br>• directional<br>• synchronisation with respective main flasher<br>• reduced in night mode |
| Working light (0°)<br>(up to 4 pcs. per lightbar) | • 9 white LEDs in the reflector housing<br>• selectable mounting position<br>• 1500 lumens |
| Rear warning system<br>(2, 4 or 6 modules possible) | • a module consists of 9 amber LEDs in the reflector housing<br>• directional<br>• available only in pairs<br>(mounted left and right) |
| Traffic advisor<br>(special approval required) | • consists of 5 or 6 middle modules with 9 amber LEDs each<br>• directional flashing sequences possible<br>• including flash pattern for rear warning system |
| *max. 6 modules possible | |



Hänsch®

# DBS 5000

| Special function | |
|---|---|
| Convoy | • "convoy front" switches the rear part of the main beacon (HKL) and the rear additional flasher (ZB) off in order not to blind the following traffic<br>• "convoy rear" switches the front part of the main beacon (HKL) and the front additional flasher (ZB) off in order not to blind the traffic travelling ahead<br>• the control unit has to support the "convoy" function |


# DBS 5000

## can switch between blue and amber

The bicoloured lightbar system DBS 5000 can be switched between blue and amber.
The blue warning signal is used to clear a path on the way to the destination.
The beacon can be switched to amber at the destination in order to act as a warning signal to secure the area.

## PRODUCT FEATURES:

- can switch between blue and amber
- both colours are homologated according to ECE-R 65
- blue: can be used to indicate the right-of-way while driving
- amber: can be used as a warning signal at the destination
- blue additional flasher
- amber additional flasher
- direction indicator*
- working light
- alley lights
- rear warning system (amber)
- power flash (blue)
- day/night switching
- partially integration of compressor horns possible
- installation of undercarriage loudspeakers possible

*CAN447 requires an I/O-Box to feed in the signals

Also availoable with examination in accordance with ICAO type C.
Further information can be found on page 110/111.

| ***Technical data:*** | |
|---|---|
| Designation: | DBS 5000 |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz (beacon) |
| Average power consumption: | from 4 A (at 12 V) |
| Lengths: | 700, 1100, 1200, 1400, 1600, 1800 mm |
| Depth: | 285 mm |
| Height: | 63 mm |
| Weight: | from 5.1 kg |
| Material: | lamp dome: PC / cover glass: PMMA / housing: aluminium |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 4446 / TA2 (E1) 00 4447 |
| EMC according to ECE-R 10: | (E1) 10R-05 7981 |
| Direction indicator: Light according to ECE-R 6: | 01 1 (E1) 4453 (front) / 2a 01 (E1) 4453 (rear) |
| Rear warning system: Light according to ECE-R 65: | XA1 (E1) 00 4471 |
| Power flash: light according to TA 13a: | ∿∿ K 1427 |



Hänsch®

# DBS 4000

Winner of the *reddot design award,* the DBS 4000 warning system combines modern design, a versatile range of functions and powerful LED lighting technology. A highly effective warning effect attracts the attention of road users and ensures additional safety when in operation. Thanks to the wide range of functions to choose from, the DBS 4000 can be adapted to suit any application.


reddot design award
winner 2013

## Customisable:
- fitted using a modular system
- easily adaptable to individual needs

## Aerodynamic housing
- low wind resistance and reduced noise levels

## Variety of mounting options
- fast and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect
- state-of-the-art lighting technology
- automatic day/night switching

## Easy operation
- analogue or digital control using the CANBus protocol, based on the CAN open Standard 447 or FireCAN

## Variety of lengths
- lengths: 1100, 1200, 1400, 1600, 1800 or 2000 mm
- divided version: 2x 430 mm (24V)

# DBS 4000


## RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter recognition)
- traffic advisor (special approval required)
- convoy function (control required)
- command vehicle light (red or green)
- integrated compressor system
- direction indicator (turning light)
- working light
- alley lights: 0° or 20° tilt
- additional flashers
- rear warning system
- power flash
- take down flash
- undercarriage loudspeaker to support public address
- tone sequence system (TFA 614/624)
- cover glass printing
- full matrix display
- day/night switching (automatic)
- tube adapter in the top possible
- also available with clear lamp dome

Also available with examination in accordance with ICAO type C.
Further information can be found on page 108/109.

| ***Technical data:*** | |
|---|---|
| Designation: | DBS 4000 |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz (beacon) |
| Average power consumption: | from 4 A (at 12 V) |
| Lengths: | 1100, 1200, 1400, 1600, 1800, 2000 mm<br>divided: 2x 430 mm (24V) |
| Depth: | 300 mm |
| Height: | 135 mm |
| Weight: | from 9 kg |
| Material: | lamp dome: PC / cover glass: PMMA /<br>housing: aluminium |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 3111 |
| EMC according to ECE-R 10: | (E1) 10R-05 6209 |
| Take down flash: light according to TA 13b: | ∿∿ K 1020 |
| Direction indicator: light according to ECE-R 6 | 01 2a (E1) 3800 (rear) / 1 01 (E1) 3822 (front) |
| Power flash: light according to TA 13a: | ∿∿ K 809 |
| RWS: light according to TA 20: | ∿∿ K 810 |



Hänsch®

# DBS 4000

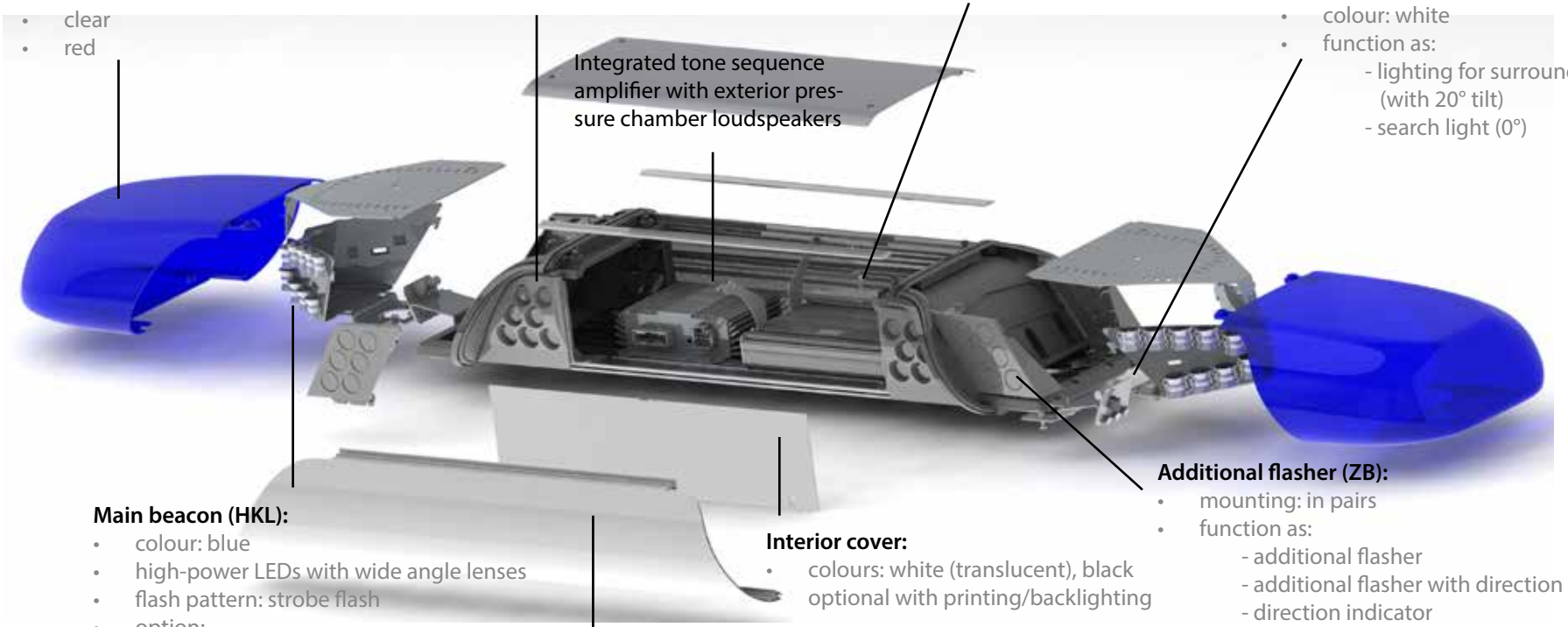
**Lamp dome** for the main beacon:
- blue
- clear
- red

**Optional light module (OLM):**
- choice of different functions

**Control module (KM):**
- analogue control
- digital control CAN447
- digital control FireCAN

**Alley light (side lights)**
- colour: white
- function as:
  - lighting for surrounding area (with 20° tilt)
  - search light (0°)

Integrated tone sequence amplifier with exterior pressure chamber loudspeakers



**Main beacon (HKL):**
- colour: blue
- high-power LEDs with wide angle lenses
- flash pattern: strobe flash
- option:
  - command vehicle light (red or green)
  - infrared LED

**Additional flasher (ZB):**
- mounting: in pairs
- function as:
  - additional flasher
  - additional flasher with direction indicator
  - direction indicator

**Interior cover:**
- colours: white (translucent), black
  optional with printing/backlighting

alternatively

**Display:**
- full matrix with various messages (CAN447)

**Cover glass:**
- colours: white, clear, blue and grey
- optional for white cover glass with printing/ backlighting

# Basic lightbar

| Possible lengths |
|---|
| 1100, 1200, 1400, 1600, 1800 and 2000 mm/divided: 2x 430 mm (24V) |

| Main beacon (HKL) | |
|---|---|
| Function | |
| Main beacon (blue) | • high-power LEDs with wide angle lenses<br>• class 2 homologation with automatic and manual day/night switching<br>• integrated function monitoring<br>• flash pattern: strobe flash<br>• optional: signal light: command vehicle light red or green, fourfold, on the main beacons (flashing)<br>• optional: helicopter recognition, fourfold, infrared rotating, for night vision devices<br>• also available with clear lamp dome |

| Control module (KM) | |
|---|---|
| Function | |
| Analogue control | • for alarm pull-twist switch, individual switch and various common analogue control units (e.g. BE 200 or BE 600) |
| Digital control | • serial control by 2-wire cable for CAN447 control units (e.g. BE 300, HBE 300)<br>• compatibility of other control units on request |
| FireCAN | • serial control for FireCAN control units |

| Function | |
|---|---|
| Rubber mouldings | • for flat or curved vehicle roofs |
| Mounting brackets | • universal and various vehicle-specific models available |
| Flat sealing | • for flat vehicle roofs |

| Electrical connection | |
|---|---|
| Function | |
| Cable outlet | • cable outlet, passenger side: standard<br>• cable outlet, driver side<br>• separate cable outlet (power supply and signal line are laid separately) |

## Options

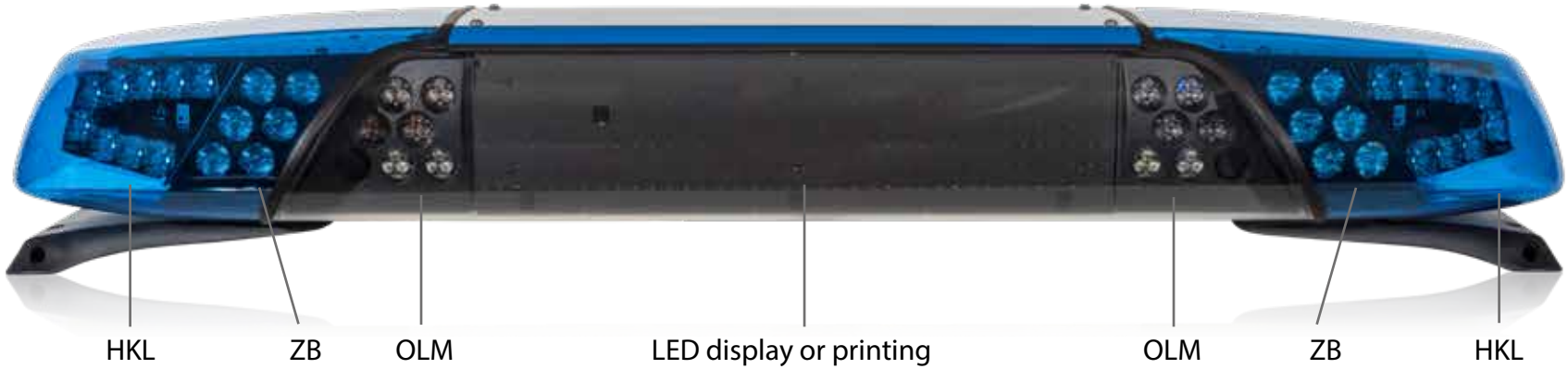
| Acoustics | |
|---|---|
| Function | |
| TFA 614 | • integrated tone sequence amplifier with one external pressure chamber loudspeaker DKL 604 or DKL 804 |
| TFA 624 | • integrated tone sequence amplifier with two external pressure chamber loudspeakers DKL 604 or DKL 804 |
| Undercarriage loudspeaker (UKL) | • undercarriage loudspeaker to the rear and/or to the front for the support of public address<br>• with integrated or exterior amplifier<br>(combination with TFA 624 only in CAN447) |
| Martin compressor system | • integrated or external Martin compressor with 4 diaphragm acoustic horn, mounted on the lightbar.<br>Additional information on page 56. |

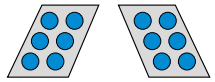
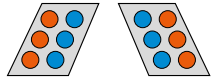
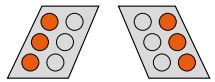
| Alley lights (side lights) | | |
|---|---|---|
| Function | | |
|  | Lighting for surrounding area | • colour: white<br>• tilt angle: 20°<br>• mounted in pairs (left and right) |
|  | Search lights | • colour: white<br>• without tilt angle<br>• mounted in pairs (left and right) |

| Display and printing | |
|---|---|
| Function | |
| Cover glass<br>(colours: white, clear, blue and grey) | • standard: white without printing<br>• optional: white with printing (backlighting possible)<br>• optional: clear without printing (interior cover or display required), a clear cover glass is mandatory when OLMs are used |
| Interior cover<br>(colours: white and black) | • standard: white without printing<br>• optional: white with printing<br>• optional: black without printing |
| Display | • various messages possible with digital control module |

## Options - front mounting

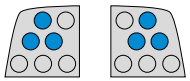
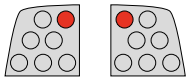
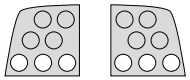
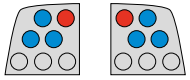
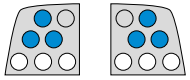
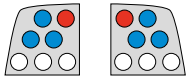
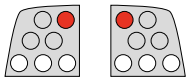
Configuration example




| Additional flashers | | | | |
|---|---|---|---|---|
| Function | | | | Possible for |
| ZB |  | Additional flashers (pair) | • consist of 12 blue LEDs<br>• directional<br>• synchronisation with respective main flasher<br>• deactivated in night mode | • 12 V<br>• 24 V |
| ZB |  | Additional flashers with direction indicator (pair) | • consist of 6 blue and 8 amber LEDs<br>• directional<br>• additional flasher: deactivated in night mode; synchronisation with respective main flasher<br>• direction indicator: function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required) | • 12 V |
| ZB |  | Direction indicators (pair)* | • consist of 8 amber LEDs<br>• directional<br>• function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required) | • 12 V |

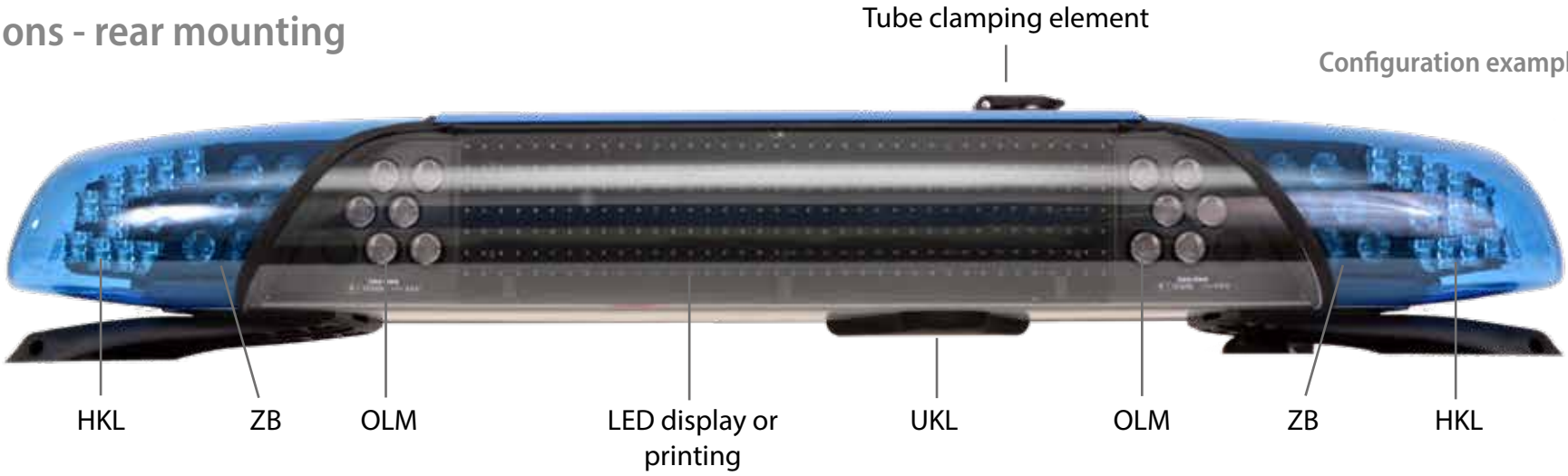
*CAN447 requires an I/O-Box to feed in the signals

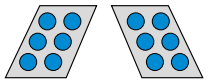
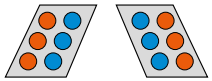
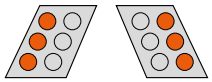
## Options - front mounting

| Optional light module (OLM) | | | | |
|---|---|---|---|---|
| Function | | | | Possible for |
| OLM |  | Power flash (PB) | • consists of 3 blue triple lenses (9 LEDs)<br>• standard: mounted left (driver side)<br>• optional: additional PB on the right (passenger side) | • 12 V<br>• 24 V |
| OLM |  | Take down flash (AHB) | • allowed only in conjunction with display<br>• consists of one red triple-lens (3 LEDs)<br>• standard: mounted left (driver side)<br>• optional: additional AHB on the right (passenger side) | • 12 V |
| OLM |  | Working light (ASW) | • consists of 3 white LEDs per module<br>• standard: mounted right (passenger side)<br>• an additional unit can be mounted on the left side (driver side) as an option<br>• light value:<br>- 600 lumens<br>- 1000 lumens<br>- 1500 lumens<br>(each with a 15° tilt angle) | • 12 V<br>• 24 V<br>• 12 V |
| OLM |  | Power flash (PB) and take down flash (AHB) | • see description of "power flash" and "take down flash" | • 12 V |
| OLM |  | Power flash (PB) and working light (ASW) | • see description of "power flash" and "working light" | • 12 V<br>• 24 V |
| OLM |  | Power flash (PB), take down flash (AHB) and working light (ASW) | • see description of "power flash", "take down flash" and "working light"<br>• light intensity: 600 or 1500 lumens | • 12 V |
| OLM |  | Take down flash (AHB) and working light (ASW) | • see description of "take down flash" and "working light"<br>• light intensity: 600 or 1500 lumens | • 12 V |

## Options - rear mounting

Configuration example




| Additional flashers | | | | |
|---|---|---|---|---|
| Function | | | | Possible for |
| ZB |  | Additional flashers (pair) | • consist of 12 blue LEDs<br>• directional<br>• synchronisation with respective main flasher<br>• deactivated in night mode | • 12 V<br>• 24 V |
| ZB |  | Additional flasher with direction indicator* (pair) | • consists of 6 blue and 8 amber LEDs<br>• directional<br>• additional flasher: deactivated in night mode; synchronisation with respective main flasher<br>• direction indicator: function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required) | • 12 V |
| ZB |  | Direction indicators (pair)* | • consist of 8 amber LEDs<br>• directional<br>• function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required) | • 12 V |

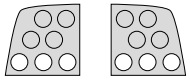
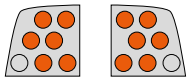
*CAN447 requires an I/O-Box to feed in the signals

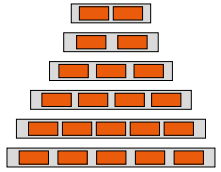


Hänsch®

# DBS 4000

## Options - rear mounting

| Optional light module (OLM) | | | | |
|---|---|---|---|---|
| Function | | | | Possible for |
| OLM |  | Working light (ASW) | • consists of 3 white LEDs per module<br>• standard: mounted right (passenger side)<br>• an additional unit can be mounted on the left side (driver side) as an option<br>• light value:<br>- 600 lumens<br>- 1000 lumens<br>- 1500 lumens<br>( each with a 15° tilt angle ) | • 12 V<br>• 24 V<br>• 12 V |
| OLM |  | Rear warning system (RWS) | • consists of 12 amber LEDs<br>• available only in pairs (mounted left and right) | • 12 V<br>• 24 V |
| A combination of both OLM options is not possible. The working lights can only be combined with the LED rear warning system type 40 pico LED. | | | | |

| RWS type 40 pico LED | | |
|---|---|---|
| Function | | |
| RWS 40 pico LED*<br>  | • one lamp body consists of 8 LEDs<br>• lamp bodies:<br>- 1100 mm: 2 lamp bodies<br>- 1200 mm: 2 lamp bodies<br>- 1400 mm: 3 lamp bodies<br>- 1600 mm: 4 lamp bodies<br>- 1800 mm: 5 lamp bodies<br>- 2000 mm: 5 lamp bodies:<br>• rear-facing lights can also be integrated as OLMs | • 12 V<br>• 24 V |
| * not combinable with OLM RWS | | |

# Options

| Special functions | |
|---|---|
| Helicopter recognition | • 4 integrated infrared LEDs<br>• allows recognition by night vision devices<br>• rotating flash pattern |
| Traffic advisor (VLE)* | • consists of 6 amber LED modules with 3 LEDs each<br>• for rear mounting<br>• choice of different flash patterns (warning function, RWS function) or traffic advisor function (arrow stick function) |
| Convoy function | • "convoy front" switches the rear part of the main beacon (HKL) and the rear additional flasher (ZB) off, in order to not blind the following traffic<br>• "convoy rear" switches the front part of the main beacon (HKL) and the front additional flasher (ZB) off, in order to not blind the traffic travelling ahead<br>• requires the appropriate control unit |
| Option with tube clamping element | • a clamping element can also be attached to mount a beacon on a tube |
| Signal light | • red or green, quadruple on the main beacons<br>• flashing |
| Integrated compressor system | • diaphragm acoustic horns mounted on the DBS 4000<br>• additional functions (e.g. RWS type 40 pico LED, VLE, etc.) possible only from a lightbar length of 1600 mm<br>• no backlighting available in any of the lengths |
| * no homologation as RWS, special approval required for traffic advisor | |

# DBS 4000

## can switch between blue and amber

The bicoloured lightbar system DBS 4000 LED can switch between blue and amber.
The blue warning signal is used to clear a path on the way to the destination.
The beacon can be switched to amber at the destination in order to act as a warning signal to secure the area.

## PRODUCT FEATURES:

- can switch between blue and amber
- both colours are homologated according to ECE-R 65
- blue: can be used to indicate the right-of-way while driving
- amber: can be used as a warning signal at the destination
- optional: integration of additional flashers to reinforce the respective warning effect
- blue additional flasher to the front and/or the rear possible
- amber additional flasher to the front and/or the rear possible

Also available with examination in accordance with ICAO type C.
Further information can be found on page 108/109.

| ***Technical data:*** | |
|---|---|
| Designation: | DBS 4000 |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz (beacon) |
| Average power consumption: | from 4 A (at 12 V) |
| Lengths: | 1100, 1200, 1400, 1600, 1800, 2000 mm |
| Depth: | 300 mm |
| Height: | 135 mm |
| Weight: | from 9 kg |
| Material: | lamp dome: PC / cover glass: PMMA / housing: aluminium |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 3111 / TA2 (E1) 00 3111 |
| EMC according to ECE-R 10: | (E1) 10R - 05 6209 |

# DBS 2000 LED

The DBS 2000 LED warning system offers a wide selectable range of functions and powerful LED lighting technology in a solid housing. A maximum warning effect attracts the attention of road users and ensures additional safety when in operation. The integration of a pressure chamber loudspeaker completes the lightbar design.


## Customisable:

- fitted using a modular system
- easily adaptable to individual needs

## Variety of mounting options

- fast and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect

- state-of-the-art lighting technology

## Easy operation

- analogue control

## Variety of lengths

- lengths: 920, 1090, 1250, 1370, 1400, 1600, 1800 and 2000 mm



Hänsch®

# DBS 2000 LED

## RANGE OF FUNCTIONS AVAILABLE

- rear warning system
- power flash
- integrated compressor system
- LED display
- tone sequence system (integrated or exterior)
- cover glass with individual printing
- day/night switching (via signal line)

| ***Technical data:*** | |
|---|---|
| Designation: | DBS 2000 LED |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz (Quadro-flash) |
| Average power consumption: | 12 V: approx. 6 A/ 24 V; approx. 3 A |
| Lengths: | 920, 1090, 1250, 1370, 1400, 1600, 1800, 2000 mm |
| Depth: | 230 mm |
| Height: | 155 mm |
| Material: | lamp dome: PC/housing: aluminium |
| Weight: | from 9.0 kg |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB1 (E1) 00 2314 / TB2 (E1) 00 3247 |
| LED power flash: light according to TA13a: | ∿∿ K 471 |
| EMC according to ECE-R 10: | (E1) 10R-05 4465 |

# Basic lightbar

| Possible lengths: |
|---|
| 920, 1090, 1250, 1370, 1400, 1600, 1800, 2000 mm |

| Main beacon (HKL) | |
|---|---|
| Function | |
| Main beacon (blue) | • high-power LEDs with wide angle lenses (homologation according to ECE R-65)<br>• blue lamp dome made of polycarbonate; housing made of aluminium<br>• with function monitoring |

| Roof mounting | |
|---|---|
| Function | |
| Rubber mouldings | • for flat or curved vehicle roofs |
| Mounting brackets | • various vehicle-specific versions available |
| Flat seal | • for flat vehicle roofs |

| Acoustics | |
|---|---|
| Function | |
| Tone sequence system | • type 614: integrated tone sequence amplifier with one integrated or external pressure chamber loudspeaker DKL 604<br>• type 624: integrated tone sequence amplifier with two integrated or external pressure chamber loudspeakers DKL 604 |
| Martin compressor system | • integrated or external Martin compressor with 4 diaphragm acoustic horn, installed on the lightbar. Additional information on page 56. |

| Display and printing |
|---|
| Function |
| • standard: white housing with white front and rear light covers<br>• optional: coating according to customer request<br>• optional: printing according to customer request (please indicate text!)<br>• optional: with takedown display |

| Rear warning system (RWS) |
|---|
| Function |
| • one lamp body consists of 8 LEDs<br>• for rear protection, mounted in pairs |

| Power flash (PB) |
|---|
| Function |
| • consists of 8 blue LEDs<br>• excellent distance effect<br>• max. 2 lamp bodies |

# Divided DBS 975 LED

The warning system divided DBS 975 LED offers a wide variety of functions as well as a high-power LED technique in a solid housing. The maximum warning effect assures increased attention of the road users and provides additional safety in an emergency. The low profile makes sure the vehicle can also reach destinations with low clearance.


## Customisable

- fitted using a modular system
- easily adaptable to individual needs

## Variety of mounting options

- fast and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect

- state-of-the-art lighting technology
- day/night switching (optional)

## Easy operation

- analogue control

## Variety of lengths

- lenghts: 2x 350, 400, 650 oder 750 mm

# Divided DBS 975


## RANGE OF FUNCTIONS AVAILABLE

- additional flasher
- working lights
- alley lights
- power flash
- day/night switching (class 2)

| *Technical data:* | |
|---|---|
| Designation: | Divided DBS 975 |
| Voltage: | 12 V / 24 V |
| Flash frequency: | > 2 Hz (quadro flash) |
| Average power consumption: | 12 V: approx. 6 A / 24 V: ca. 3 A |
| Lengths: | 2x in 350, 400, 650 and 750 mm |
| Depth: | 260 mm |
| Height: | 95 mm |
| Weight: | from 8.2 kg |
| Type of protection: | IP5K4K |
| *Homologation: (Germany and nternational)* | |
| Light according to ECE-R 65: | TB1 (E1) 00 2332 - (blue) / TB2 (E1) 00 2798 - (blue - class 2) |
| EMC according to ECE-R 10: | (E1) 10R-05 4465 |
| Power flash: light according to TA 13a: | ∿∿ K 471 |
| Direction indicator according to ECE-R 6: | 01 2a (E1) 2532 (rear) |



Hänsch®

# Divided DBS 975

## Basic lightbar

| Possible length: |
|---|
| 2x 350, 400, 650 or 750 mm |

| Main beacon (HKL) | |
|---|---|
| Function | |
| Main beacon (blue) | • high-power LEDs with wide angle lenses (homologation according to ECE-R 65)<br>• blue lamp dome made of polycarbonate; housing made of aluminium |

| Roof mounting | |
|---|---|
| Function | |
| Rubber mouldings | • for flat or curved vehicle roofs |
| Mounting brackets | • universal and various vehicle-specific models available |
| Flat sealing | • for flat vehicle roofs |

## Options

| Rear warning system (RWS) |
|---|
| Function |
| • one lamp body consists of 8 LEDs<br>• for rearward security<br>• mounted in pairs |

| Power flash (PB) |
|---|
| Function |
| • consists of 8 blue LEDs<br>• excellent long-distance effect<br>• max. 2 lamp bodies |

| Additional flasher |
|---|
| Function |
| • mounted in pairs (left and right)*<br>• can be installed to the front and/or the rear |
| *two or more pairs additional flashers require day/night switching |

| Working lights |
|---|
| Function |
| • can be installed to the front and/or the rear<br>• consists of 4 white LEDs per lamp body |

# Control units

The various functions of the control units in vehicles of the police, fire brigade and rescue services must be as fast, safe and easy to operate as possible. The most important functions can all be accessed using the fast access buttons. Whether mounting control unit or hand-held control unit, we offer a range of options for a variety of applications.

**BE 300 Control units**

**BE 200 Control units**

**BE 600 Control units**

Example picture

**Universal control units**

**Control unit HBE 300**

**Hand-held control unit HBE Profi**

**Rod microphone H2**

**Control unit BE 304**

**BE 312 Cupholder**



Hänsch®

# HBE 300

The HBE 300 is able to control both CAN-compatible warning systems as well as analogue supplements. In addition to models for "fire brigade/ emergency doctor", we also offer models that are specially designed for the requirements of the police sector. Additionally, there are universal models which are available for the fire service and police sector.


## PRODUCT FEATURES:

- CANopen Standard 447
- 8 fast access buttons
- 4 menu buttons
- buttons with location and activation lighting
- integrated microphone for public address
- high-contrast wide angle display
- easy to operate thanks to large buttons
- convenient menu navigation with self-explanatory icons
- analogue outputs for additional functions
- can be used in any vehicle (even without a 447 gateway)
- various models available

| *Homologation: (Germany and international) HBE 300* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-05 6932 |

| *Technical data* | |
|---|---|
| Weight: | 170 g |
| Dimensions: | 66 x 124 x 24 mm (WxHxD) |
| Voltage: | 12 V / 24 V multi voltage |

Hänsch®

Examples:

| Functions of the fast access buttons (HBE 300) | |
|---|---|
| | Simultaneously switches on the main beacons, 3rd beacon and IR-flasher and if installed, the take down flash off. Night dimming is activated during operation by pressing and holding the button (> 3 sec.). |
| | Simultaneously switches on the main beacons, 3rd beacon and IR-flasher and if installed, the take down flash off. A tone sequence cycle can be triggered with the horn if the ignition is switched on. |
| | Simultaneously switches on the main beacons, front flasher, 3rd beacon and IR-flasher and if installed, the take down flash off. Press again to switch off the tone sequence. |
| POWER | Activates/deactivates the power flash when the main beacons are activated (locks with the main beacons) |
| FRONT | Activates/deactivates the front flasher. (locks with the main beacons) |
| STADT LAND | Changes the tone sequence signal type. A quiet tone sequence cycle is triggered by pressing and holding the button if the main beacons are activated and the ignition is switched on (Kl.15). (> 3 sec.) |
| RWS | Activates/deactivates the rear warning system. |
| STOP | Switches on the takedown display with "STOP POLICE" and the red take down flash. The red take down flash is not switched on when the main beacons are activated. |
| YELP | Triggers the "acoustic stop signal" cycle as well as the red take down flash, when the ignition and the takedown display are on ("STOP POLICE") and the blue light is off. |
| FOL | Activates/deactivates the rear take down display signal with "PLEASE FOLLOW". |


| Functions of the menu navigation buttons (HBE 300) | |
|---|---|
| | Navigate upwards through menu items and functions |
| | Navigate downwards through menu items and functions |
| OK | Select and choose menu items/functions |
| | Return to the previous menu item level. By holding and pressing this button, you also switch off all active functions. |



Hänsch®

# BE 304

The new control unit BE 304 impresses with a compact housing and various mounting options. The raised buttons with a clear pressure point provide a very good surface feel. This control unit is optimally suited for undercover police operations as well as for other emergency and work vehicles with a basic set of functions. Due to its versatile functional options the BE 304 can be optimally configurated for any application area.


*15 mm height*


## PRODUCT BENEFITS:

- compact plastic housing
- 4 buttons for controlling CAN447 products
- location and activation lighting
- horizontal or vertical positioning possible (4x1 or 1x4)
- combination of various control units or as an additional keypad for other CAN447 control units
- 4-core connection cable via cable harness to CAN447 components
- surface mounting variation; rack mounting variation on request
- including analogue inputs and outputs

## APPLICATION AREAS:

- vehicles with reduced options of warning functions
- undercover police operation
- simple firefighter vehicles
- amber application: construction vehicles, commercial vehicles, airports
- replacement for single switches in CAN447 systems

| *Approvals: (Germany and international)* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-05 8548 |

| *Technical specifications:* | |
|---|---|
| Weight: | 45 g |
| Dimensions: | 84 x 26 x 15.5 mm (WxHxD) |
| Voltage: | 12 V / 24 V |

# BE 312 Cupholder

The BE312 Cupholder control unit can be used both in covert police operations and in any special-purpose vehicle where space is limited when installing control units. Building the unit into a standard cup enables easy installation in an existing cup holder. It is therefore ideally positioned in reach of the driver and can also be fixed in easily. The 12 buttons can be configured and arranged to suit customer requirements in terms of function and marking symbols. In addition to the CAN components, configurable inputs and outputs can be used for the evaluation or control of analogue components/signals, as with the proven HBE300 and BE304.

## PRODUCT FEATURES:

- 12 buttons for controlling CAN-enabled equipment
- optical function and fault alerts
- buttons with location and activation lighting
- including analogue inputs and outputs
- securely fitted into vehicle cupholder
- housing: car ashtray black
- nominal voltage 12 V or 24 V

## AREAS OF APPLICATION:

- covert operations
- simple vehicle installation
- installation in cupholder
- proven operating concept / wiring concept incl. FÜP of HBE300/BE304

| ***Homologation: (Germany and international)*** | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-06 9022 |

| ***Technical data:*** | |
|---|---|
| Weight: | 240 g |
| Dimensions (closed): | 86 x 125 x 86 mm (WxHxD) |
| Dimensions (open): | 86 x 190 x 86 mm (WxHxD) |
| Voltage: | 12 V / 24 V |



Hänsch®

# BE 300 control units

The various models in the BE 300 series offer a high degree of flexibility. In addition to a serial interface that meets the CAN447 standard, the various models also offer analogue outputs to control products that are not CAN447-compatible.

## Overview of options

# BE 300 control units

## BE 308M

surface-mounting
housing available


### PRODUCT FEATURES:

- menu-guided control unit with 8 additional function buttons
- including analogue in- and outputs (4x inputs and 10x outputs)
- selection of various messages for the full matrix
- control of various light options (e.g. convoy, alley lights, etc.)
- fitting dimensions for DIN vehicle radio shaft
- operation of the voice announcement options (e.g. selection of the sound source, volume control, when ASM is mounted, etc.)

| *Homologation: (Germany and international) control units BE 300* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-04 6703 |

## BE 314


### PRODUCT FEATURES:

- 14 function buttons for operating CAN447-compatible products
- including analogue in- and outputs (4x inputs and 10x outputs)
- fitting dimensions for DIN vehicle radio shaft
- can be used with or without vehicle gateway
- various button assignments can be selected
- optimal for controlling DBS 4000 and DBS 5000

| *Technical data (BE 308 \| BE 308 M \| BE 314)* | |
|---|---|
| Weight: | 160 g |
| Dimensions: | 180 x 52 x 24 mm (WxHxD) |
| Voltage: | 12 V / 24 V |



Hänsch®

# BE 300 control units

## BE 308


### PRODUCT FEATURES:

- 8 function keys for operating CAN447-compatible products
- including analogue in- and outputs (4x inputs and 10x outputs)
- small housing dimensions
- can be used with or without vehicle gateway
- various button assignments can be selected
- cover for DIN vehicle radio shaft available as an option

| *Homologation: (Germany and international) control units BE 300* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-04 6703 |

## BE 300M


### PRODUCT FEATURES:

- purely menu-guided control unit
- exclusively for operating a CAN447 full matrix
- selection of various messages for the full matrix
- cover for DIN vehicle radio shaft available as an option

| *Technical data (BE 308 & BE 300M)* | |
|---|---|
| Weight: | 140 g |
| Dimensions: | 93 x 52 x 24 mm (WxHxD) |
| Voltage: | 12 V / 24 V |

# BE 200 control unit

The BE 200 control unit ensures simple and safe operation of the warning systems. A total of 6 buttons allow the operation of the basic and other additional functions and thus offers maximum flexibility.


| *Homologation: (Germany and international) control unit 200* | |
|---|---|
| EMC according to 72/245/EWG: | e1 03 3477 |

| *Technical data* | |
|---|---|
| Weight: | 180 g |
| Dimensions: | 76 x 41.5 x 32.5 mm (WxHxD) |
| Voltage: | 12 V / 24 V |

## PRODUCT FEATURES:

- 6 buttons to control the functions
- all buttons are with backlighting and have activation control
- free buttons, partly with possibility of locking with beacons
- three control lights for function monitoring
- small housing dimensions
- more predefined variations already available
- cover for DIN vehicle radio shaft available as an option



Hänsch®

# BE 600 control unit

The BE 600 control unit ensures reliable and easy operation of the warning systems and provides maximum flexibility. Through a total of 10 buttons operation of the basic functions and other additional functions is provided.


## PRODUCT FEATURES:

- 10 buttons to control the functions
- public address, playback, connection of incoming radio signals to the exterior loudspeakers with adjustable volume
- all buttons have backlighting and activation control
- free buttons, partly with option to lock the beacons
- four control lights for function monitoring
- acoustic control signal for take down display (police version)
- more predefined variations already available
- fitting dimensions for DIN vehicle radio shaft

| *Homologation: (Germany and international) control units BE 600* | |
|---|---|
| EMC according to 72/245/EWG: | e1 03 3478 |

| *Technical data* | |
|---|---|
| Weight: | 210 g |
| Dimensions: | 170 x 41.5 x 32.5 mm (WxHxD) |
| Voltage: | 12 V / 24 V |

# Hand-held control unit HBE Profi/Rod microphone H2

The hand-held control unit HBE Profi is used to operate the tone sequence system and other analogue products.

## PRODUCT FEATURES:

- simple handling and uncomplicated operation
- easy installation
- complete control of the warning system with beacons, including function monitoring, tone sequence signal and urban/rural switching (or Yelp/Wail/Hilo switching) as well as command speaking with adjustable volume

| *Homologation: (Germany and international) HBE Profi* | |
|---|---|
| EMC according to 72/245/EWG: | e1 03 5235 |

| *Technical data* | |
|---|---|
| Dimensions: | 102.5 x 50 x 26.5 mm (WxHxD) |
| Voltage: | 12 V / 24 V |

The rod microphone H2 is used for voice announcements with a Hänsch tone sequence amplifier, a Hänsch voice amplifier or in combination with the Hänsch ASM 2.
The new development impresses with improved speech quality and a higher volume control range. Back coupling is reduced immensely. The microphone can be used from any angle and no longer has to be brought up to the lips for public address. While developing the rod microphone H2, we also focused on a cleaner PPT pressure point.

## PRODUCT FEATURES:

- command speaking via push-to-talk button
- volume control
- incl. holder for the installation in the vehicle
- connection via standard cable harness TFV 6x4 (CAN447/analogue) or via additional connecting cable directly at the TFV 6x4 CAN447 respectively at the audio switching module (ASM)
- operating voltage: 12 V (in combination with TFV 6x4/ASM also available in a 24 V power supply network)

| *Homologation: (Germany and international) Rod microphone H2* | |
|---|---|
| EMV nach ECE-R 10 | E1 10R-05 8887 |



Hänsch®

# Universal control unit

A selection of our control units is also available as universal version. These are freely configurable and can therefore serve any purpose. Differences are only made between the application areas "fire/emergency doctor" and "police".

The universal control units offer all the advantages of our standard control units. The buttons can be individually assigned and interlocked with the respective functions. Analogue outputs can be added.

It is also possible to choose favourites from a large selection of pre-programmed, application-specific texts in order to show them quickly and easily in the takedown display.

## Variations of BE 308 Universal:


- BE 308 P Universal, 12 V
- BE 308 FN Universal, 12 V or 24 V

| *Technical data* | |
|---|---|
| Weight: | 140 g |
| Dimensions: | 93 x 52 x 24 mm (WxHxD) |

*For more information, please contact our customer service.*

## Variations of BE 308 M Universal:


- BE 308 M - P Universal, 12 V

| *Homologation: (Germany and international) control units BE 300* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-04 6703 |

| *Technical data* | |
|---|---|
| Weight: | 160 g |
| Dimensions: | 180 x 52 x 24 mm (WxHxD) |

# Universal control unit

## Variations of BE 314 Universal:


Fig. FN

- BE 314 P Universal, 12 V
- BE 314 P Universal, 12 V

## Variations of HBE 300 Universal:


Fig. FN

- HBE 300 P Universal 1, 12 V
- HBE 300 FN Universal, 12 V
- HBE 300 FN Universal, 24 V

A selection of buttons/button laminations is included, more button caps available.
Except for the basic buttons, all others are freely exchangeable and configurable.

| *Homologation: (Germany and international) control units BE 300* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-04 6703 |

| *Technical data* | |
|---|---|
| Weight: | 160 g |
| Dimensions: | 180 x 52 x 24 mm (WxHxD) |

| *Homologation: (Germany and international) HBE 300* | |
|---|---|
| EMC according to ECE-R 10: | (E1) 10R-05 6932 |

| *Technical data* | |
|---|---|
| Weight: | 170 g |
| Dimensions: | 66 x 124 x 24 mm (WxHxD) |



Hänsch®

# Undercover police operation

## Fast and safely to the destination

Things have to go fast in an emergency - operation must be quick and easy while driving, especially in the case of civilian vehicles.
We offer specially tailored products for undercover police operation.


**Display for police operations**

**Mobile case system**

**Movia-SL LED**

*(see page 16)*

**Sputnik nano mobil**

*(see page 40)*

**Sputnik SL Smoky**

**Sputnik mini black**



Hänsch®

# Displays for police operations

## DISPLAYS - OVERVIEW OF VARIANTS

Information and takedown displays are used for targeted communication with the road user ahead or behind. By means of various texts and display sizes, the desired information can be transmitted to the addressee. The red LEDs provide the necessary luminosity and good readability. The control is analogue or via CiA447 with a supply voltage of 12 V.

### ASG FOR SUN VISOR

- display size: 50 mm x 234 mm
- interior mounting
- text orientation to the front

### ASG FRONT

- display size: 50 mm x 234 mm
- interior mounting
- text orientation to the front


### ASG FOR ENGINE BONNET

- display size: 50 mm x 234 mm
- exterior mounting
- text orientation to the front


### ASG FLIP

- display size: 75 mm x 373 mm
- interior mounting
- text orientation to the front
- motorised folding


### ASG FOR HAT SHELF

- display size: 86 mm x 431 mm
- interior mounting
- text orientation to the rear
- vertical or horizontal mounting
- motorised folding


### ASG REAR

- display size: 50 mm x 234 mm
  or 86 mm x 431 mm
- exterior or interior mounting
- text orientation to the rear


### ASG BIG

- display size: 195 mm x 923 mm
- interior mounting
- text orientation to the rear

# Displays for police operations

## ASG FOR SUN VISOR

- display size: 50 mm x 234 mm
- LEDs quantity: 7 x 29
- interior mounting
- text orientation to the front
- low installation effort (the takedown display is mounted by Hänsch directly onto the passenger sun visor provided by the customer)
- with acoustic switch-on control (for analogue version)
- takedown flash possible (in message breaks)
- display cover in black, gray or beige

| *Zulassung :* | |
|---|---|
| Take down flash according to TA13b: | K 1094 |
| EMC according to ECE-R 10: | E1 10R-05 6817 |


## ASG FLIP

- display size: 75 mm x 373 mm
- LED quantity: 7 x 38
- interior mounting
- text orientation to the front or rear
- with motorised installation

| *Homologation:* | |
|---|---|
| EMC according to ECE-R 10: | E1 10R-05 6817 |


## ASG FOR ENGINE BONNET

- display size: 50 mm x 234 mm
- LED quantity: 7 x 29
- exterior mounting
- text orientation to the front
- takedown flash possible (in message breaks)
- console color blue
- with vehicle-specific console for VW T6

| *Homologation:* | |
|---|---|
| Take down flash according to TA13b: | K 1586 |
| EMC according to ECE-R 10: | E1 10R-05 6817 |


## ASG FRONT

- display size: 50 mm x 234 mm
- LED quantity: 7 x 29
- interior mounting
- text orientation to the front
- takedown flash possible (in message breaks)

| *Homologation:* | |
|---|---|
| Take down flash according to TA13b: | K 1586 |
| EMC according to ECE-R 10: | E1 10R-05 6817 |




Hänsch®

# Displays for police operations

## ASG FOR HAT SHELF

- display size: 86 mm x 431 mm
- LED quantity: 7 x 38
- interior mounting
- text orientation to the rear
- with motorised installation
- vertical or horizontal mounting

| *Homologation:* | |
|---|---|
| EMC according to ECE-R 10: | E1 10R-05 6817 |



## ASG REAR

- display size: 50 mm x 234 mm or 86 mm x 431 mm
- LED quantity: 7 x 29 or 7 x 38
- exterior or interior mounting
- text orientation to the rear

| *Homologation:* | |
|---|---|
| EMC according to ECE-R 10: | E1 10R-05 6817 |


## ASG BIG

- display size: 195 mm x 923 mm
- LED quantity:  77 x 17
- interior mounting
- text orientation to the rear


## PRODUCT FEATURES:

- different variants and mounting versions
- high luminosity enables visibility through tinted windows
- suitable for external mounting, for concealed installation on the hat shelf, for the sun visor or in the rear of the vehicle
- analogue (max. 3 texts) and CiA447 versions available
- control of the digital version via a CiA447 compatible control unit
- voltage: 12 V

# Takedown display ASG Flip

Undercover and open police vehicles with flat blue lightbars, emergency forces need a takedown or information display that does not impair their own field of vision and can be installed in the vehicle in the best possible disguise. The extremely slim design and the possibility of vertical and horizontal mounting of the ASG Flip offers full flexibility: The typical mounting location is at the front of the dashboard at the level of the rear-view mirror of the vehicle in front.


## PRODUCT FEATURES:

- full matrix with 38x7 LEDs (red)
- type height 75 mm (complies with FuStW directive)
- type width 375 mm
- voltage: 12 V
- available in analogue (max. 3 messages) or CiA447
- motorised opening/closing when text is (de)activated
- acoustic feedback for stop texts
- for installation in the interior of the vehicle
- vehicle-specific holder available

| *Homologation: (Germany an international)* | |
|---|---|
| EMV nach ECE-R10: | E1 10R-06 9227 |



Hänsch®

# Takedown display ASG Big

In certain situations, it is helpful if emergency services can use an oversized takedown or information display in order to get the attention of other road users. Typical examples are larger distances between special vehicles and following vehicles on motorways, extremely unfavourable weather conditions or informing vehicles on several lanes from the hard shoulder. For these applications, the ASG Big, mounted from inside onto the tailgate, can be used.




## PRODUCT FEATURES OF THE ASG BIG 7x1:

- combination of 7 modules to form a large display
- full matrix with a total of 77x17, i.e. 1309 high-power LEDs
- type height 195 mm
- type width 923 mm
- 12 V supply voltage
- control via CiA447
- for installation in the interior of the vehicle
- universal mechanical connection options on the strut profile
- possibility of text display in red, yellow and red/yellow


## Mobile case system

The mobile warning system in an aluminium pilot's case provides the user with a complete visual and acoustic solution. The mobile warning system is particularly suitable for users who do not have a warning system in their vehicle but need to have one in case of an emergency.

The individual components of the warning system can be stored and transported safely in the pilot's case. During the emergency, both the LED beacon and the loudspeaker can be attached to the vehicle roof via magnet. The magnetic fixing is testet at up to 250 km/h.

### PRODUCT FEATURES:

- no additional equipment required on the vehicle
- easy to use
- vehicle independent warning system
- connection with Sputnik nano mobil possible
- scope of delivery:
  - magnetic LED beacon type MOVIA - SL
  - tone sequence system 614 with a magnetic pressure chamber loudspeaker
  - operation using the HBE Profi (with public address option)

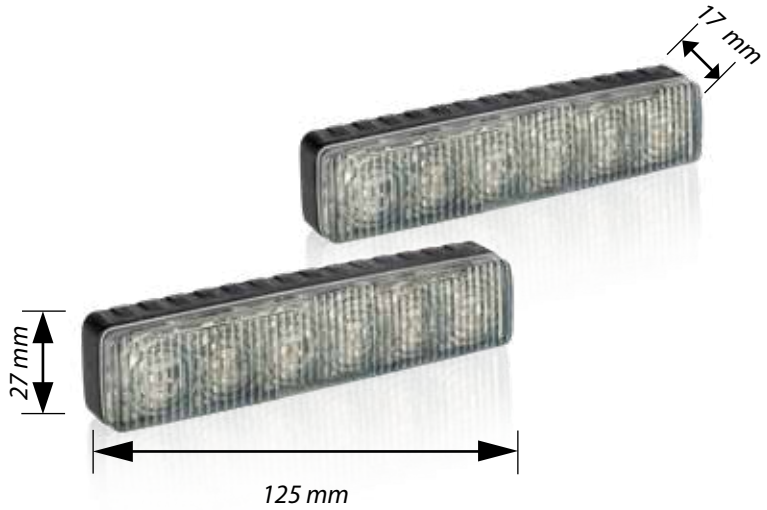
Our mobile warning case system has a homologation with one loudspeaker, since the powerful and approved tone sequence system TFA 614 is installed.

# Undercover police operation

| *Technical data:* | |
|---|---|
| ***Designation:*** | ***Case*** |
| Dimensions (WxDxH): | 430 x 185 x 285 mm |
| ***Designation:*** | ***MOVIA - SL*** |
| Voltage: | 12 V |
| Flash frequency: | > 2 Hz |
| Average power consumption: | 12 V / 1.6 A |
| Material: | housing: aluminium /<br>lamp dome: polycarbonate |
| Type of protection: | IP5K4 / IPX9K |
| *Homologation (Germany and international):* | |
| Light according to ECE-R 65: | TB1 (E1) 00 3139 |
| EMC according to ECE-R 10: | (E1) 10R-04 5669 |
| ***Designation:*** | ***Tone sequence amplifier 614*** |
| Voltage: | 12 V |
| Average power consumption: | 12 V: 2.0 A |
| Operating temperature range: | -40° C to +80° C |
| Alarm part: | Special signal according to DIN 14610 |
| ***Designation:*** | ***Pressure chamber loudspeaker DKL 604*** |
| Power rating: | 70 W |
| Impedance: | 4 Ω |
| *Homologation (Germany):* | |
| Acoustics according to TA 32 | ∿∿∿ W 25060 |
| EMC according to ECE-R 10: | (E1) 10R-05 7535 |

## Sputnik SL Smoky

The front flasher Sputnik SL Smoky, with the proven modern lighting technology of our Sputnik SL, are particularly suitable for undercover police operations in a civilian vehicle. Due to the tinted lens, the special vehicle is only clearly recognisable as such when in use, as conspicuous reflections of sun and ambient light are reduced.




Comparison
Sputnik SL Smoky – Sputnik SL

### PRODUCT FEATURES:

- available for horizontal mounting
- two or more lamp bodies can be synchronised
- can be adjusted to fit the contour of the radiator grille
- complete sealing of the lamp bodies ensures insensitivity to high pressure or steam jet cleaning
- universal cable can be configured as a control cable, day/night cable or activation cable
- universal holder and various vehicle-specific holder available for optimal positioning and easy mounting
- Y-cable for easy electrical connection available

| ***Technical data:*** | |
|---|---|
| Designation: | Sputnik SL Smoky |
| Voltage: | 12 V / 24 V multi voltage |
| Average power consumption: | 12 V: 0.8 A (per LK)<br>24 V: 0.6 A (per LK) |
| Type of protection: | IP6K7 / IPX9K |
| ***Homologation:*** | |
| Light according to ECE-R 65: | |
| horizontal: | XB1 (E5) 00 0069 |
| EMC according to ECE-R 10: | (E1) 10R-05 6845 |



Hänsch®

# Sputnik mini black

The LED warning system Sputnik mini black is particularly suitable for undercover police in a civilian vehicle. Due to the coloured lens, the special vehicle is only clearly recognizable as such when in use, as conspicuous reflections from the sun and ambient light are reduced.

## PRODUCT FEATURES:

- very compact design for universal use
- light colour: blue
- housing: aluminum
- remote electronics for up to 2 lamp bodies
- X-approval

| ***Technical data:*** | | |
|---|---|---|
| Material | Housing: | aluminium, black anodised |
| | Cover glass: | PC |
| | Electronics: | PA |
| Dimensions: | Lamp body: | ø 27 mm / depth 29,5 mm |
| | Electronics: | 95,5 x 26 x 13 mm (WxHxD) |
| Weight: | Lamp body: | 25 g |
| | Electronics: | 245 g |
| Type of protection: | IP6K7 / IPX9K | |
| Voltage: | 12 V / 24 V multi voltage | |
| Temperature range: | -40 °C to +60 °C | |
| Avg. power consumption*: | 0,8 A at 12 V<br>0,5 A at 24 V | |
| Peak*: | 2,3 A at 12 V<br>1,1 A at 24 V | |
| * electronics with 2 lamp bodies | | |
| Flash pattern: | Strobe flash (configurable) | |
| ***Homologations: (Germany and international)*** | | |
| Light according to ECE-R 65: | XB1 (E5) 00 0073 (K1) | |
| EMC according to ECE-R 10: | (E1)10R-05 8617 | |

*Dimensions lamp body:*
*27 mm x 29,5 mm*
*(diameter x depth)*

Further products for undercover operations can be found on our homepage www.fg-haensch.com


Cartalker®

Under-threat alarm system
for armoured vehicles



Hänsch®

# Cartalker ®

The Cartalker is a safe way to communicate with the outside world from inside a closed vehicle. The Cartalker is an intercom which can be installed in any vehicle. The system's easy operation and hidden components ensure comfort and safety.

The Cartalker has a versatile range of possible uses e.g. in taxis, trucks etc. In the context of rescue service vehicles, security services and fire brigades, it is often necessary for drivers and people in a second separate part of the vehicle to be able to communicate. The Cartalker allows secure and easy communication between both parts of the vehicle.


## Overview of options

**Cartalker I**

- intercom between the inside and outside (or inside and inside)
- mounting control unit with integrated internal microphone
- electronic operating unit
- 2 exterior microphones with connecting cable (length: 5 m)
- external pressure chamber loudspeaker with connecting cable (length: 5 m)
- interior loudspeaker with connecting cable (length: 0.5 m)

**Cartalker II**

- intercom system between the inside and outside (or inside and inside) (hand-held control unit with integrated microphone and interior loudspeaker)
- electronic operating unit
- 2 exterior microphones with connecting cable (length: 5 m)
- hand-held control unit with spiral cable, integrated microphone and interior loudspeaker
- external pressure chamber loudspeaker with connecting cable (length: 5 m)

| *Homologation: (Germany and international)* | |
|---|---|
| EMC according to 72/245/EWG: | e1 03 3040 |

# Under-threat alarm system (GAS)

The GAS system has been specially developed for use in armoured vehicles such as armoured limousines or cash-in-transit vehicles. The primary functions of GAS are a two-way intercom communication and an alarm that is triggered in the event of an attack on the vehicle. In addition, there is also an option of using GAS in conjunction with a beacon as a special signalling system.

| Components | Mounting location | Functions |
|---|---|---|
| Operating unit GAS 614 or GAS 624 | in the vehicle interior | 1. two-way intercom communication<br>2. generation of an attack alarm<br>3. control of a beacon<br>4. generation of special signals |
| DKL 604 (1 or 2 pieces) | behind the radiator grille | 1. playback of voice traffic from the vehicle interior<br>2. broadcast of the attack signal<br>3. broadcast of the special signal |
| Mirror microphones (2 pieces) | exterior vehicle mirror | recording of the voice traffic/sounds surrounding the vehicle |
| Hands-free and/or rod microphone | e.g. near driver seat | recording of the voice traffic inside the vehicle |
| Push button or control unit | e.g. near driver seat | 1. activation of attack alarm as panic button<br>2. activation of voice traffic<br>3. activation of the beacon and special signal, if installed |
| Interior loudspeakers | use interior loudspeakers of the vehicle or order and install separately - near the driver seat | playback of the mirror microphone signals |
| Optional: beacon | on the vehicle roof | required in combination with the special acoustic signal to clear a path on the way to a location |

# Under-threat alarm system (GAS)

## PRODUCT FEATURES:

- the amplifier circuit developed for special-purpose vehicles creates a very high sound pressure level, even for the attack alarm – increased safety for vehicle occupants
- two-way intercom communication in closed, armoured vehicle possible with very clear voice transmission
- no intervention in the vehicle body required – easy mounting, compact design of the components, discreet to install
- unique combination of intercom, special signal (pre-programmed with German homologation and US tones selectable) and attack alarm

***For more information or a non-binding consultation, please contact us.***

## Operating unit GAS 614/624

The perfect balance between amplifier technology and the DKL 604 produces extremely high sound pressure for the special signal and alarm. The integrated intercom with outstanding voice quality allows communication with people on the outside of an armoured vehicle, e.g. by using the vehicle hands-free device and additional microphones installed in the exterior mirrors.

- powerful output stage (GAS 624) for attack alarm and special signals (many pre-programmed)
- homologation for German special signal according to DIN 14610 with two or even just one DKL 604
- integrated intercom
- extremely compact control unit

| *Homologation: (Germany and international)* | |
|---|---|
| Acoustic according to TA32: | ∿∿ W 25071 |
| EMC according to ECE R-10: | (E1) 10R-05 8888 |

# Mobile warning and communication system

## MOWACOM

The mobile warning and communication system (MOWACOM) has been specially developed for users in professional use. It is designed to be easily transported, set up and operated by one person. The system is powered by the cigarette lighter, so it can be used without a power supply and also in private vehicles. The components, which have proven themselves in special applications, are integrated in the stackable protective case. The basic version includes a roof unit, a handset with integrated microphone for voice announcements and an amplifier with jack plug interface. The package can be expanded to include a digital recording/playback device with interfaces for additional external audio sources (USB stick, MP3 player, mobile phone audio, etc.) as well as a beacon.

## PRODUCT BENEFITS:

**Easy handling by one person:**

- storage and transport in a compact and robust protective case
- easy to set up on emergency and civilian vehicles, intuitive 12-button operation

**Independent of the mains**

- system is operated via the vehicle cigarette lighter

**Warning:**

- standardised warning tones with high penetration implemented
- broadcasting all around (360°) or sector sounding (separate: right – left; front – rear)
- optional: LED-beacon Comet S in amber or blue

**Communication:**

- integrated microphone for direct voice announcements, jack interface for importing audio files
- optional: digital recording/playback device DigiRec with an integrated voice memory, expandable via USB stick and audio in endless loops and/or in change with warning tone

**10 years warranty**



Hänsch®

# MOWACOM

## Components

1. stackable hard case
2. tone sequence amplifier 744 (integrated in the case)
3. hand-held control unit HBE 300 MOW DE
4. roof unit
5. optional: Comet S beacon
6. optional: DigiRec (integrated in the case)


Hänsch
ENGINEERED AND MADE IN GERMANY

### AREAS OF APPLICATION:

- civil defence and disaster control
- fire brigades
- municipal services and utilities
- public order offices and authorities
- organisers of major events
- explosive ordnance disposal service

| *Technical data:* | case | roof unit |
|---|---|---|
| Material: | plastic | stainless steel, plastic |
| Measurements W x H x D: | 600 x 400 x 223 mm | 250 x 250 x 170 mm |
| Colour: | red or anthracite | orange |
| Weight: | 12 kg (total weight) | 6 kg |
| Voltage: | 12 V | - |

Hänsch®

## Hänsch - The custom solution specialist

Hänsch has made a name for itself in Germany and abroad for its special solutions for visual and acoustic warning systems. All from a single source – from the initial idea, to the designing and testing stages, to the final homologation. The engineers from the Hänsch development centre are responsible for the entire project and are ready to respond to our customers' questions and concerns.

We deal with our customers on an individual basis and develop high-quality solutions to meet their specific requirements. Many years of experience in the area of integrated solutions ensure the creation of a tailor-made vehicle concept, which is given its own identity through its modern design while also complying with European directives.

# INTEGRO - integrated solutions

## INTEGRO - our services - your benefits

- **from the initial idea to homologation**
- **customised solutions**
- **modern design**

Along with standard products, our customers also receive special, integrated solutions perfectly adapted to their requirements (INTEGRO). This might include installing a beacon in the roof of a special-purpose vehicle to suit the customer's needs – the roof becomes the beacon and the vehicle's design gives it a new identity and makes it highly recognisable.

For these projects Hänsch engineers work closely with vehicle manufacturers and special roof manufacturers to develop a concept, create a design and subsequently make these ideas reality. At the end you have a vehicle which conforms to European directives.

### OUR SERVICES:

- support from the idea to homologation
- consulting service during the construction phase*:
  - positioning, mounting, processing
- consulting service during the design phase*:
  - customer identity must be unique
- handling the homologation
- providing the adapted lighting technology:
  - highest light value with certificate

** We would be happy to advise you if required. In addition, Hänsch designers and engineers are also at your disposal.*

### BENEFITS:

**Great amount of experience with INTEGRO projects worldwide means:**

- short implementation time
- expert advice
- certainty with regard to homologation
- flexible mounting
- fully or partially integrated solutions for any budget
- homologation according to ECE-R 65, approval marks with E1 from the KBA
- fast turnaround times for requested changes or additions thanks to our in-house photometric and EMC labs

# Rear warning systems

All beacons with a XA-homologation can be used to set up a rear warning system on vehicles with blue lights. Thus, blue-light vehicles can be secured to the rear with amber lights, in accordance with §52 Abs. 11 of the German road traffic regulations. 2, 4 or 6 lamp bodies, which must flash synchronously, may be mounted at the top of the rear.

## HWS Sputnik mini

### PRODUCT FEATURES:

- 4 high-performance LEDS per lamp body
- external electronics for 2 lamp bodies
- special optics for optimum light distribution

## HWS Sputnik Compact

Einbaugehäuse (EG)

Aufbaugehäuse (AG)

### PRODUCT FEATURES:

- 4 high-performance LEDS per lamp body
- special optics for optimum light distribution
- maximum warning effect
- electronics fully integrated in the lamp bodies
- available as rack or surface mounting
- easy mounting due to the compact and flat design
- long service life due to high-quality LED technology

## HWS Sputnik SL

### PRODUCT FEATURES:

- 6 high-performance LEDS per lamp body
- electronics fully integrated in the lamp bodies
- special optics for optimum light distribution
- maximum warning effect > 500 candela



Hänsch®

# Rear warning systems


| ***Technical data:*** | | | |
|---|---|---|---|
| Designation: | HWS Sputnik mini-A1 | HWS Sputnik Compact-A | HWS Sputnik SL-A / SL-A-V |
| Voltage: | 12 V / 24 V multi voltage | 12 V / 24 V multi voltage | 12 V / 24 V multi voltage |
| Flash frequency: | >2 Hz | >2 Hz | >2 Hz |
| Average power consumption: | 12 V: 0,8 A (per lamp body)<br>24 V: 0,5 A (per lamp body) | 12 V: 0,25 A (per lamp body)<br>24 V: 0,14 A (per lamp body) | 12 V: 0,4 A (per lamp body)<br>24 V: 0,2 A (per lamp body) |
| Measurements (WxHxD): | Lamp body: Ø 27 mm / depth 29,5 mm<br>Electronics: 95,5 x 26 x 13 mm (WxHxD) | EG: 73 x 34 x 2,5 mm (WxHxD)<br>AG: 90 x 31 x 10 mm (WxHxD) | 125 x 27 x 17 mm (WxHxD) |
| Material: | EL: PA, LK: Al / PC | Zn / PC | Al / PC |
| Protection type: | IP6K7 / IPX9K | IP6K5 | IP6K7/ IPX9K |
| ***Homologation: (Germany and international)*** | | | |
| Light according to ECE-R 65: | XA1(E5)00 0071 | XA1(E1)00 4110 | SL-A: XA1(E1)00 3652 / SL-A-V: XA1(E1)00 3757 |
| EMC according to ECE-R 10: | (E1)10R-05 8617 | (E1)10R-04 7591 | (E1)10R-05 6845 |

# Rear warning systems

The Hänsch rear warning systems are the safe add-on to standard warning systems. One system consists of at least two lamp bodies. It ensures a timely indication of dangers in all kinds of weather conditions and visibility conditions for the subsequent traffic. All Hänsch RWS systems are equipped with powerful LED technology.

RWS Sputnik Compact

RWS 40 Pico LED

RWS Sputnik Pico LED

RWS Sputnik SL



Hänsch®

# Rear warning systems

Rack mounting (EG)

Surface mounting (AG)

## RWS Sputnik Compact:

- 4 high-power LEDs per lamp body
- special lens for optimised light diffusion
- maximum warning effect
- entire electronics integrated into the lamp body
- rack mounting and surface mounting options available
- compact, flat design for simple mounting
- long-lasting thanks to the high-quality LED technology

Rack mounting (EG)

Surface mounting (AG)

## RWS 40 Pico LED:

- 8 high-power LEDs per lamp body
- entire electronics integrated into the lamp body
- special lens for optimal light diffusion
- available with or without mounting frame

Rack mounting (EG)

Surface mounting (AG)

## RWS Sputnik Pico LED:

- 4 high-power LEDs per lamp body
- entire electronics integrated into the lamp body
- special lens for optimal light diffusion
- available with or without mounting frame

# Rear warning system

## RWS Sputnik SL:

- 6 high-power LEDs per lamp body
- entire electronics integrated into the lamp body
- special lens for optimal light diffusion
- maximum warning effect > 500 candela

| ***Technical data:*** | | | | |
|---|---|---|---|---|
| Designation: | RWS Sputnik Compact | RWS Sputnik SL | RWS 40 Pico LED | RWS Sputnik Pico LED |
| Voltage: | 12 V / 24 V multi voltage | 12 V / 24 multi voltage | 12 V / 24 V | 12 V / 24 V |
| Flash frequency: | > 2 Hz | > 2 Hz | > 2 Hz | > 2 Hz |
| Average power consumption: | 12 V: 0.25 A (per lamp body)<br>24 V: 0.14 A (per lamp body) | 12 V: 0.4 A (per lamp body)<br>24 V: 0.2 A (per lamp body) | 12 V: 2.5 A / 24 V: 1.25 A | 12 V: 1.5 A / 24 V: 0.75 A |
| Dimensions (WxHxD): | EG: 73 x 34 x 2.5 mm<br>AG: 90 x 31 x 10 mm | 125 x 27 x 17 mm | 169.5 x 85 x 61 mm | 80 x 80 x 60 mm |
| Material: | Zn/PC | Al/PC | ASA/PC | ASA/PC |
| Type of protection: | IP6K5 | IP6K7 / IPX9K | IP5K4K | IP5K4K |
| ***Homologation: (Germany)*** | | | | |
| Light according to TA20: | D: ∿ K1160 | D: ∿ K 960 (hor. )/ ∿ K1010 (vert.) | D: ∿ K538 | D: ∿ K 544 |
| EMC according to ECE-R 10 or 72/245/EWG: | (E1) 10R-04 7591 | (E1) 10R-05 6845 | (E1) 10R-05 4465 | [e1] 03 5635 |



Hänsch®

# Airport

- highest safety on the runway
- tested in accordance with ICAO type C (for more information see page 114)

We offer warning systems for the airport fire brigade which are tested according to ICAO Type C. With special control units, the digitally controlled variants can be switched to an ECE-R 65 compliant flash pattern, so that the use in regular road traffic is permitted.

# ICAO beacon

Our CAN447 beacons can be switched between ECE-R 65 and ICAO Type C with a corresponding control unit. For further information please contact our sales departement.

## COMET LED

Further information on beacons can be found on page 8 & 9.

### Fix mounting

**PRODUCT FEATURES:**

- fix mounting in accordance with DIN 14620, form B1
- colours: also available in amber (with function monitoring)
- also available as blue/amber switchable version with flash pattern switching (ECE / ICAO)

### Magnetic fixing

**PRODUCT FEATURES:**

- with spiral cable and triple magnetic fixing
- optimum bonding even on curved vehicle roofs
- rubber-coated magnets to protect paintwork from scratches
- tested at up to 250 km/h

### Flexible tube

**PRODUCT FEATURES:**

- for fitting on a mounting tube in accordance with DIN 14620
- impact-resistant housing base

## COMET S

Further information on beacons can be found on page 5 & 6.

### Fix mounting

**PRODUCT FEATURES:**

- fix mounting in accordance with DIN 14620, form B1
- two rows of LEDs provide full-area illumination
- colours: also available in amber (with function monitoring)

### Flexible tube

**PRODUCT FEATURES:**

- for fitting on a mounting tube in accordance with DIN 14620
- impact-resistant housing base
- two rows of LEDs provide full-area illumination



Hänsch®

# DBS 4000

The well-known warning system DBS 4000 is also available for the airport fire brigade, tested according to ICAO Type C. With special control units, the DBS 4000 can be switched to an ECE-R 65 compliant flash pattern, so that an operation in regular roadtraffic is permitted.

## Configured to customer requirements

- mounted using a modular system
- easily adaptable to individual needs
- switching of flash patterns possible

## Aerodynamic housing

- low wind resistance and reduced noise levels

## Variety of mounting options

- quick and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect

- state-of-the-art lighting technology
- automatic day/night switching

## Easy operation

- digital control using the CANBus protocol, based on the CANopen Standard 447

## Variety of lengths

- lengths: 1100, 1200, 1400, 1600, 1800 and 2000 mm

# DBS 4000


## RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter recognition)
- traffic advisor (special approval required)
- convoy function (control required)
- command vehicle light (red or green)
- integrated compressor system
- direction indicator (turning light)
- working light
- alley lights: 0° or 20° tilt
- additional flashers
- rear warning system
- power flash
- take down flash
- undercarriage loudspeaker to support public address
- tone sequence system (TFA 614/624)
- cover glass printing
- full matrix display
- day/night switching (automatic)
- tube adapter in the top possible
- also available with clear lamp dome
- also available as switchable blue/amber version (tested in accordance with ICAO type C). (further information on page 57)
- also available with red radiation colour (without test in accordance with ICAO type C)
- switching of flash pattern (between ECE-R 65 and ICAO type C) possible

(some features only work in ECE-R 65 operation)

For more information about the options of the DBS 4000, see page 52 onwards.

| ***Technical data:*** | |
|---|---|
| Designation: | DBS 4000 |
| Voltage: | 12 V / 24 V |
| Flash frequency (ECE-R 65): | > 2 Hz (beacon) |
| Flash frequency (ICAO type C): | 1 Hz (beacon) |
| Average power consumption: | from 4 A (at 12 V) |
| Lengths: | 1100, 1200, 1400, 1600, 1800, 2000 mm<br>divided: 2x 430 mm (24V) |
| Depth: | 300 mm |
| Height: | 135 mm |
| Weight: | from 9 kg |
| Material: | lamp dome: PC / cover glass: PMMA /<br>housing: aluminium |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light according to ECE-R 65: | TB2 (E1) 00 3111 (blue) |
| EMC according to ECE-R 10: | (E1)10R-05 6209 |
| Take down flash: light according to TA 13b: | ∿∿ K 1020 |
| Direction indicator: light according to ECE-R 6 | 01 2a (E1) 3800 (rear) / 1 01 (E1) 3822 (front) |
| Power flash: light according to TA 13a: | ∿∿ K 809 |
| RWS: light according to TA 20: | ∿∿ K 810 |



Hänsch®

# DBS 5000

The DBS 5000 warning system combines modern design, a versatile range of functions and high-performance LED lighting technology. A maximum warning effect ensures increased attention at the airports. The low-profile design not only ensures low air resistance and reduced noise, but also makes it possible to pass sites where clearance height is an issue. The DBS 5000 warning system is tested in accordance with ICAO type C.

reddot award 2017
winner

## Configured to customer requirements

- mounted using a modular system
- easily adaptable to individual needs
- switching of flash patterns possible

## Aerodynamic housing

- low wind resistance and reduced noise levels
- low-profile design height

## Variety of mounting options

- fast and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect

- state-of-the-art lighting technology
- automatic day/night switching

## Easy operation

- digital control using the CANBus protocol, based on the CANopen Standard 447

## Variety of lengths

- lengths: 700, 1100, 1200, 1400, 1600 or 1800 mm

# DBS 5000

## RANGE OF FUNCTIONS AVAILABLE

- working lights
- day/night switching (automatic)
- alley lights: 0° or 20° tilt
- acoustics (undercarriage loudspeaker for public address)
- additional flashers
- direction indicator (turning light)*
- traffic advisor (special approval required)
- also available as switchable blue/amber version (tested in accordance with ICAO type C) (further information on page 46)
- also available with red radiation colour (without test in accordance with ICAO type C)
- switching of flash pattern (between ECE-R 65 and ICAO type C) possible

*CAN447 requires an I/O-Box to feed in the signals.

For more information about the options of the DBS 5000, see page 44 onwards.

| ***Technical data:*** | |
|---|---|
| Designation: | DBS 5000 |
| Voltage: | 12 V / 24 V |
| Flash frequency (ECE-R 65): | > 2 Hz (beacon) |
| Flash frequency (ICAO type C) | 1 Hz (beacon) |
| Average power consumption: | from 4 A (at 12 V) |
| Lengths: | 700, 1100, 1200, 1400, 1600, 1800 mm |
| Depth: | 285 mm |
| Height: | 63 mm |
| Weight: | from 5.1 kg |
| Material: | lamp dome: PC / cover glass: PMMA / housing: aluminium |
| Type of protection: | IP5K4K / IPX9K |
| ***Homologation: (Germany and international)*** | |
| Light in accordance with ECE-R 65: | TB2 (E1) 00 4446 |
| EMC in accordance with ECE-R 10: | (E1) 10R-05 7981 |
| Direction indicator: Light in accordance with ECE-R 6 | 01 1 (E1) 4453 (front) / 2a 01 (E1) 4453 (rear) |
| Direction indicator: Light according to ECE-R 6: | 01 1 (E1) 4453 (front) / 2a 01 (E1) 4453 (rear) |
| Rear warning system: Light according to ECE-R 65: | XA1 (E1) 00 4471 |
| Power flash: light according to TA13a: | ∿∿ K 1427 |

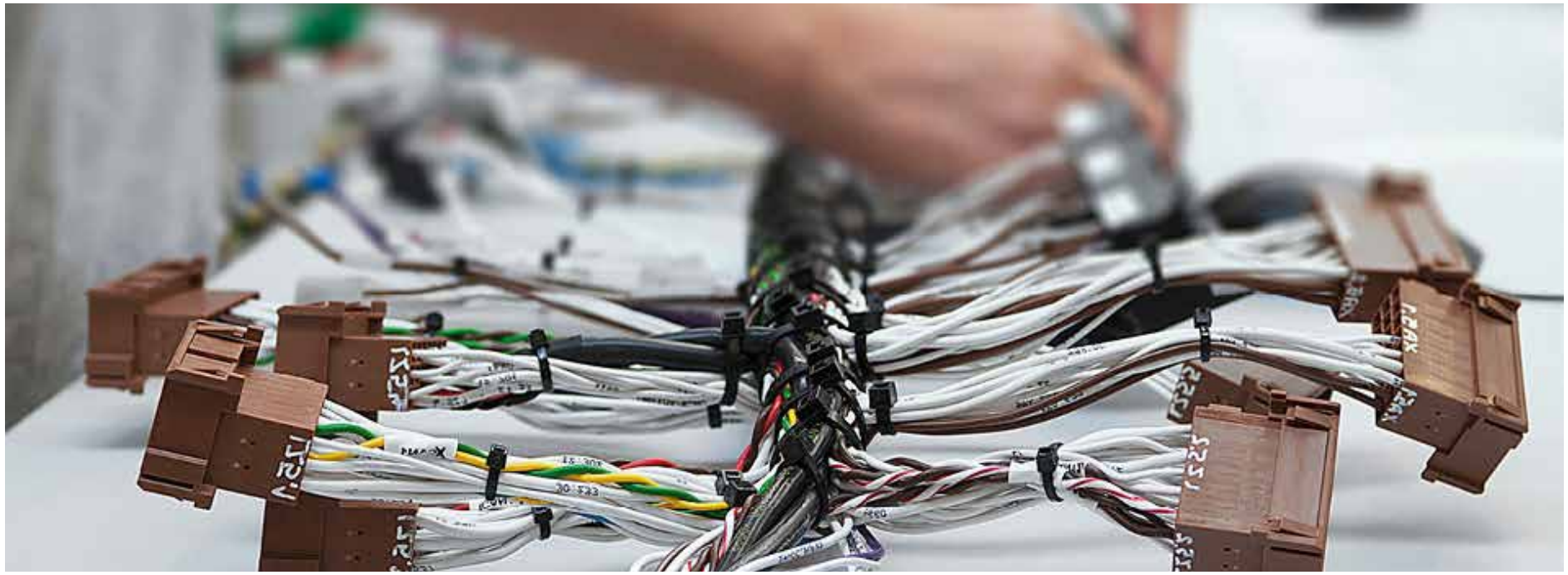


Hänsch®

# Cable assembly

## We connect your special-purpose vehicle systems

Since 2019, Hänsch also offers complete, customised solutions in the field of system wiring. From development and design to manufacturing and delivery, we support our customers in integrating the specific wiring cable sets for their special-purpose vehicles. The cable harnesses are designed as ready-to-connect segments.
We can look back on many years of experience, primarily in the field of special-purpose vehicle construction. Projects are implemented purposefully and professionally by us. This is always done in close cooperation with the customer. Our team supports you from analysing to the final integration into the vehicle.

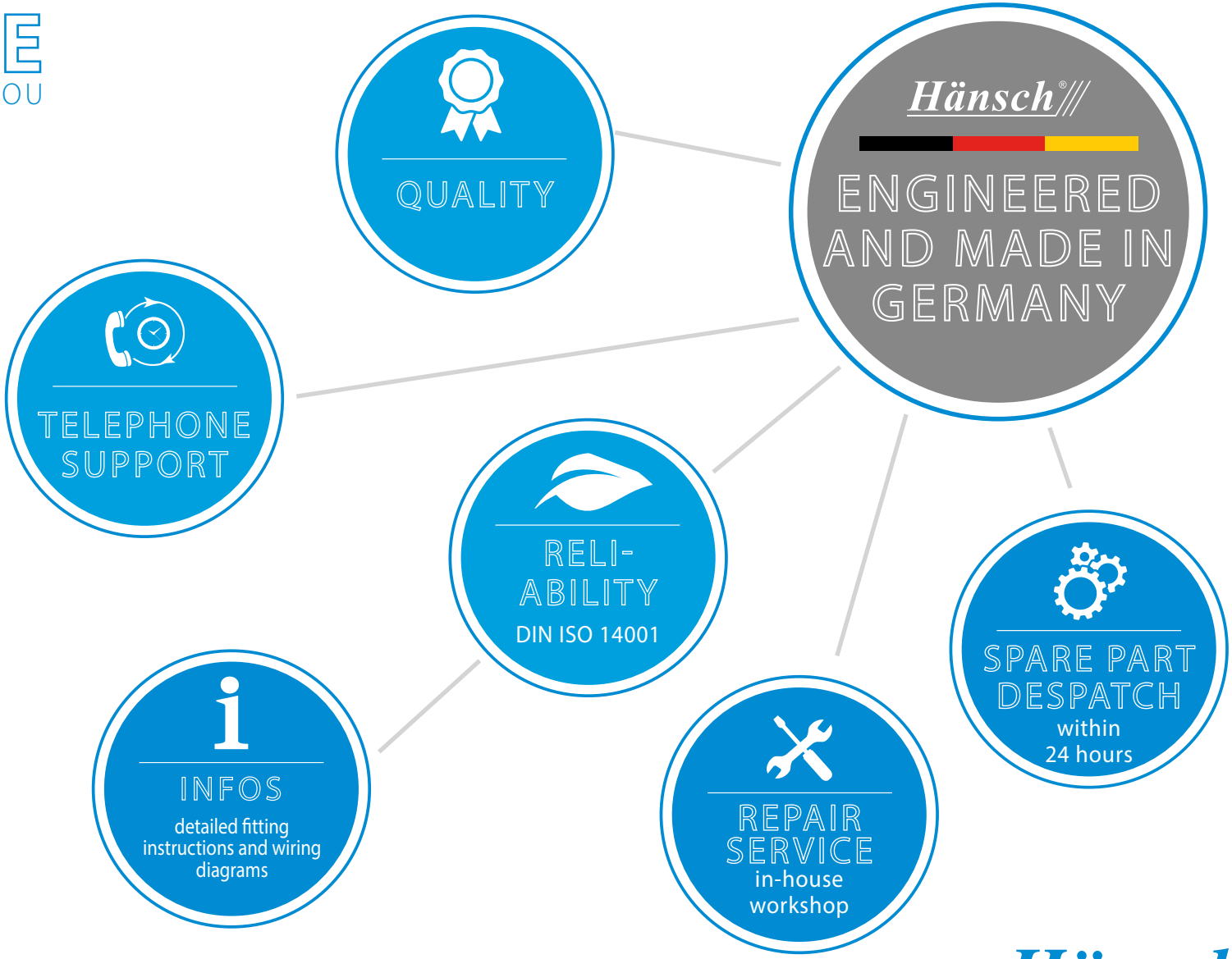


**Contact details:**
Hänsch Signalconcept GmbH
Potsdamer Straße 19
14513 Teltow

Tel. +49 03328 3373 60
sales@fg-haensch.de

# OUR SERVICE FOR YOU


AT YOUR SIDE. WITH SAFETY.






Hänsch®

# Glossary

## ICAO:

The ICAO or EASA standards (European equivalent) are international regulations for technical equipment and devices that may be used at the airport.

The products listed here are tested for compliance with the type C standard. It requires light values in the range between -3.5 ° and + 8.5 ° as well as a flash frequency in the range of 1 to 1.5 Hz and a maximum power of 400 cd. The beacons or lightbar systems are not allowed to have day/night switching.

### Hänsch products:

The company Hänsch has tested the following product families in accordance with ICAO type C in the field of beacons and declares their conformity to the standard:

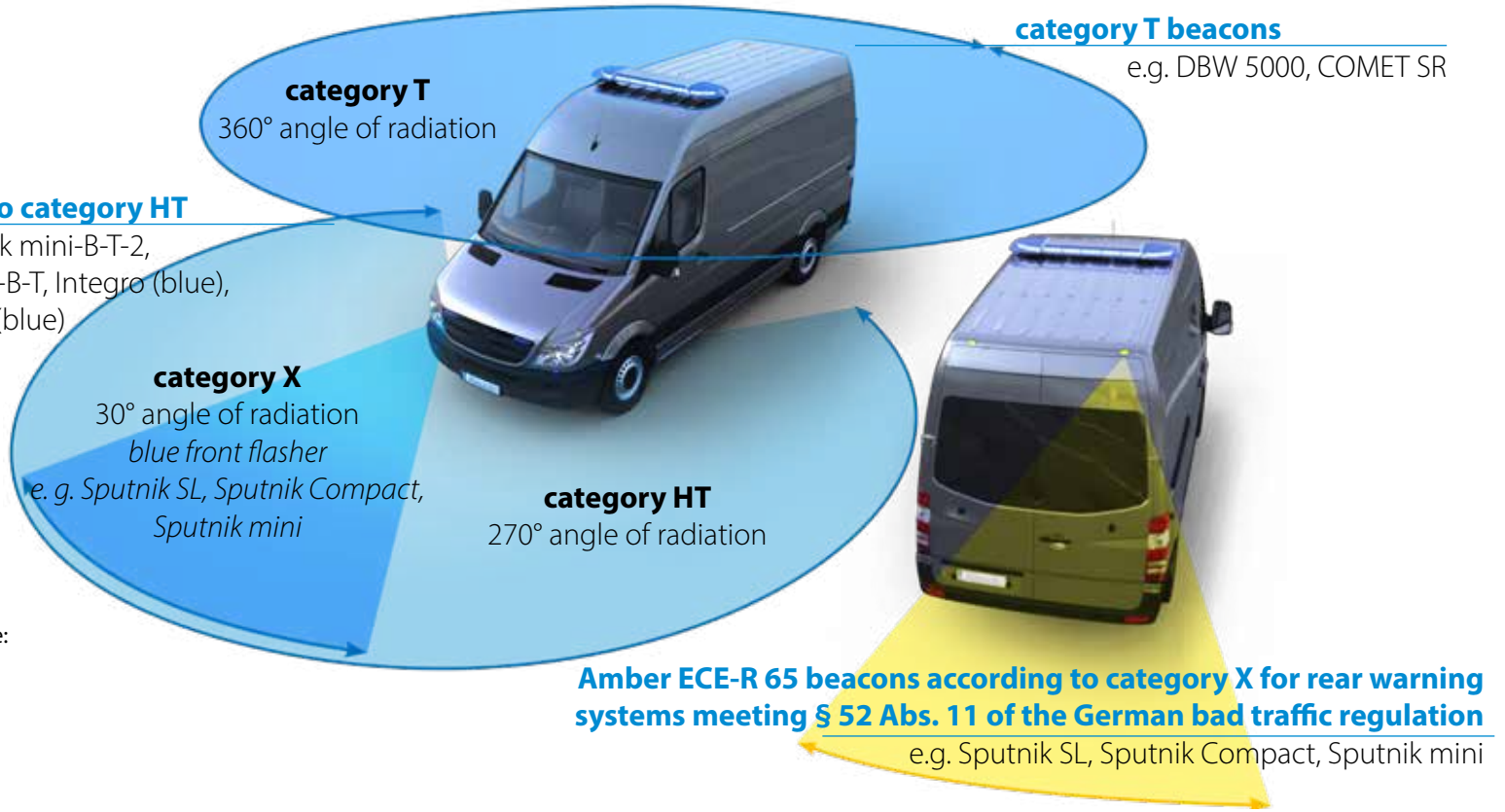
- Comet LED: amber and blue, blue/amber switchable
- Comet S: amber and blue
- DBS/F 4000: amber and blue, blue/amber switchable
- DBS/W 5000: amber and blue, blue/amber switchable

The single beacons Comet LED and Comet S are available with testing in accordance with ICAO Type C as analogue variants and CAN447 versions. The DBS/F 4000 and DBS/W 5000 lightbar systems are only available with CAN control. For the CAN control, programmed control units in accordance with ICAO are required. Here it is possible to switch between flash patterns in accordance with ICAO type C and ECE-R 65.

### Feel free to contact our sales department!

## When are HT-solutions used?

If the installation of conventional beacons on the vehicle is not possible due to constructional conditions, the legally required geometric visibility of 360° can still be achieved by using an HT-solution. The HT-solution, also known as a half beacon or a half lightbar, can be mounted on the vehicle to the front or to the rear, or it can be integrated into the vehicle body. The various Hänsch systems, consisting of 2 to 6 HT lamp bodies, give you total flexibility when constructing a vehicle. With the Sputnik mini and Sputnik SL HT-solution, mounting towards the front of the vehicle also gives the earliest possible warning effect, such as at intersections or when leaving the depot.




Further information can be found here:

# Glossary

| Property | Explanation |
|---|---|
| Function monitoring | Function monitoring allows the operating state of the unit to be tested.<br>The respective operating state can be transmitted by analogue signal line or over the CAN447 bus. |
| Class II homologation (K2) | The product has a homologation with 2 light intensity levels. The light value can be reduced for night time.<br>This is done to prevent a glare from excessive light values at night, in case of fog/snow/bad vision. |
| Day/night switching | Night reduction allows products with a class II homologation to reduce the maximum light value either automatically when a defined twi-light value is reached, or manually by control unit (e.g. by HBE 300). |
| Convoy function | The convoy function deactivates the front or rear-facing beacons. Some products can also be switched off on one side (e.g. DBS 4000/5000, COMET S). (This prevents convoy drivers ahead or behind from being blinded by the bright lights.) |
| Soft light signal (night) | Special flash pattern with ECE homologation recreating a rotating beacon, but with simultaneous 360° radiation. Recommended application especially for work vehicles so that users can work more relaxed and for longer time with less aggressive light. |
| Rear warning system according to § 52 (11) StVZO | The system consist of 2, 4 or 6 directional, amber flash lights of the category X (homologation: XA ...). They are mounted on top of the rear of the vehicle and are used to secure vehicles with blue light when stationary or at walking pace. |
| 12 V | This product has a rated voltage of 12 volt. |
| 12 V / 24 V | This product is available with a rated voltage of 12 V and with a rated voltage of 24 volt. |
| 12 V / 24 V multi voltage | This product is multi-voltage compatible and can be operated at 12 volts as well as at 24 volts. |


Picture credits:

- Product photos on the title page and pages, 3-16, 18-24, 28-31, 33, 35-37, 39-40, 42, 44, 48-51, 53, 57, 59, 62, 64, 69-81, 83, 91-94, 96, 98 (5), 101, 103-105, 107-111: **Timo Lutz Werbefotografie**
- Vehicle photos on pages 2, 33, 34, 41, 43, 50 left, 52, 63, 82, 84, 87 left, 88 left (bottom), 102: **Michael Rauch Photography**
- Pages 17, 25 : **MOVIADLED**
- Page 22: **BRK**
- Page 24: **KevTheMedic**
- Pages 38, 50 right: **INTAX Innovative Fahrzeuglösungen GmbH**
- Page 66: **Fa. EMPL**
- Page 67: **Neckartalfingen Fire Brigade**
- Page 73 (bottom), 84, 89-90, 98, 112: **Hänsch**
- Page 87 right, Page 88 right: **Fa.Binz**
- Page 93 (top): **Audi AG**
- Page 99, 100 (bottom): **Rosenbauer**
- Page 100 (top): **AmbulanzMobile**
- Page 106: **Airport Stuttgart (Maks Richter)**


| Abbr. | Explanation |
|---|---|
| A | Fixed tube |
| AF | Flexible tube |
| B | Fix mounting |
| BF | Fix mounting with function monitoring |
| M | Magnetic fixing |

Subject to modifications and errors.

Hänsch®

Schützenstraße 21
49770 Herzlake
Germany
+49 (0)5962/ 9360-0
sales@fg-haensch.de

# Catalogue for blue applications

Subject to modifications

Issue: April 2022

**www.fg-haensch.com**