Hänsch®

CATALOGUE

ENGLISH

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LED beacons

Hänsch®

LED beacons

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

Our LED beacons can be used flexibly in every area of application. Different mounting and size variants enable an assembly for every class of vehicle. Long-lasting, low power consumption and high electromagnetic compatibility characterise our LED beacons.

Model size comparison

COMET S / SR	COMET	SATURN	NOVA	MOVIA-SL
Example vehicle type: Car	Example vehicle type: Car	Example vehicle type: Van/Transporter	Example vehicle type: Truck	Example vehicle type: Car

COMET S

Overview of options

Whether fix mounting, tube mounting or magnetic fixing – the various versions of the COMET S LED beacon 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

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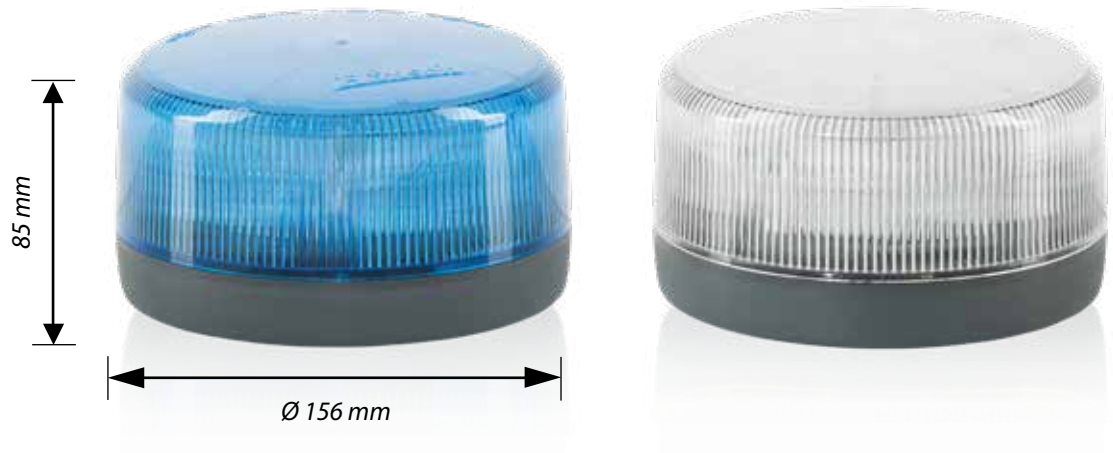
Fix mounting



Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

PRODUCT FEATURES:

- fix mounting according to 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 CiA447 version
  - also available with clear lamp dome
  - also available as a red beacon for use as a command vehicle light, controlled via CiA447
  - soft light signal (night) possible
- colours: also available in amber, red and green

Technical data:	
Designation:	COMET S
Voltage:	12 V / 24 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: PBT-GF30
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

COMET S

Magnetic fixing

PRODUCT FEATURES:

- with spiral cable and triple magnetic fixing
- optimum adhesion, even on slightly curved vehicle roofs
- rubber-coated magnets protect paintwork against 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 CiA447 cable)
  - day/night switching (automatic)
  - analogue or CiA447 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 rigid (A) tube
  - also available with clear lamp dome
  - soft light signal (night) possible
- colours: also available in amber and red

Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

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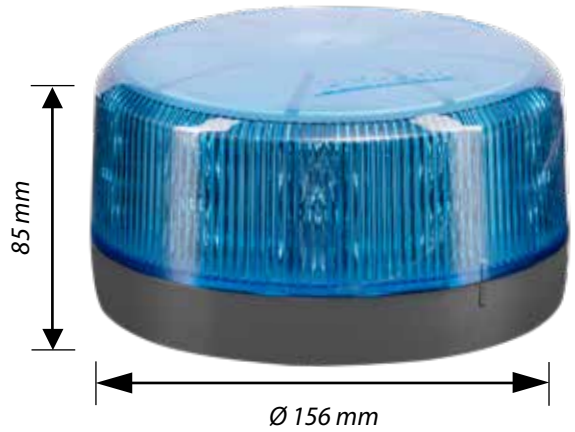
New light technology with more LEDs and rotating light function – in the housing of the Comet S.

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



PRODUCT FEATURES:

- compact plastic housing
- two rows of LEDs ensure a high warning effect
- flash pattern: possibility 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 version
- colours: also available in amber

Technical data:	
Designation:	COMET SR
Voltage:	12 V / 24 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: 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 9004

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 COMET LED beacons are distinguished by powerful LED technology with an outstanding warning effect integrated in a sturdy housing.

Fix mounting

Magnetic fixing

Tube mounting

Hänsch®

Fix mounting

PRODUCT FEATURES:

- fix mounting according to DIN 14620, form B1
- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - function monitoring (low or high)
  - analogue or CiA447 version
  - also available with clear lamp dome
- colours: also available in amber, red, green, blue/amber and 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 protect paintwork against 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 in a version tested in accordance with ICAO type C. Further information can be found on page 118.

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-06 5669

Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

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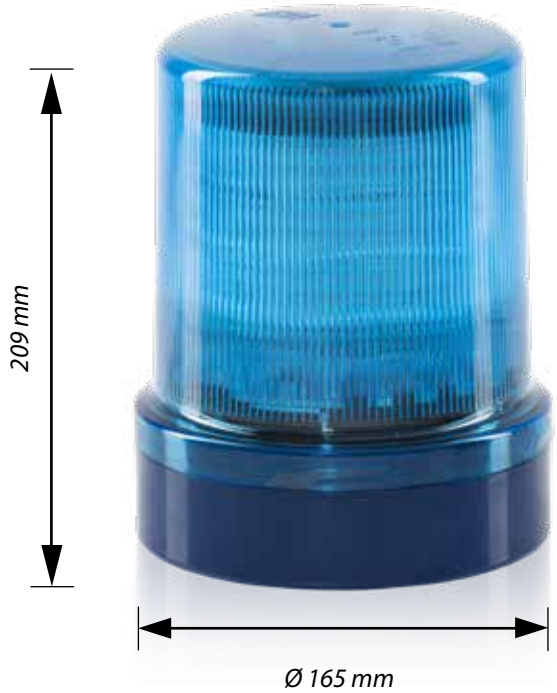
SATURN LED

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. Our SATURN LED beacons are distinguished by powerful LED technology with an outstanding warning effect in a compact housing.

Fix mounting



PRODUCT FEATURES:

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

Tube mounting

PRODUCT FEATURES:

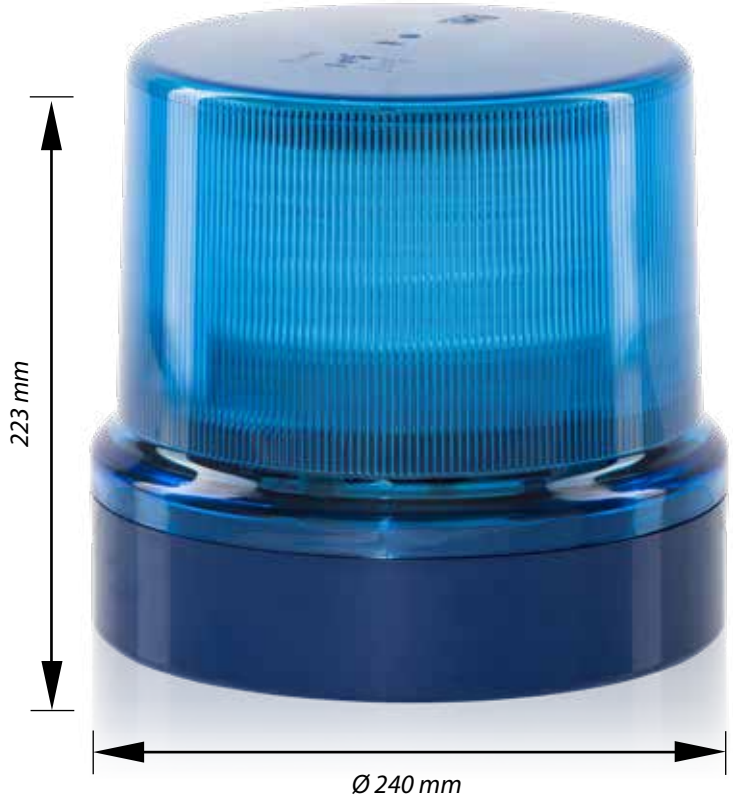
- for fitting on a mounting tube in accordance with DIN 14620
- impact-resistant housing base
- options:
  - flexible (AF) or rigid (A) tube
- colours: also available in amber and red

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-06 5669

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 according to DIN 14620, form B2
- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - function monitoring (low or high)
  - analogue or CiA447 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-06 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. Up to 90% higher light values (averaged) are achieved through the use of 24 high-performance LEDs.

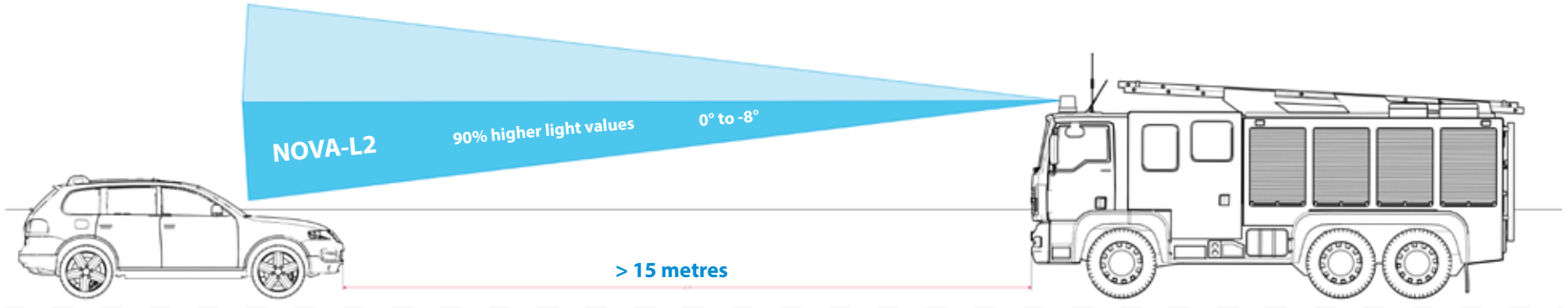
PRODUCT FEATURES:

- fix mounting according to 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)

INCREASED WARNING EFFECT IN ROAD TRAFFIC

The NOVA-L2, designed for 24 V vehicle voltage, is mainly used for large vehicles. A higher warning effect is achieved in all weather conditions (sunshine, rain, fog), as a result of which the NOVA-L2 ensures greater safety in road traffic. The development was based on the Hänsch quality "Made in Germany". In addition to the maximum warning effect, the NOVA-L2 is characterised above all 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 5214
EMC according to ECE-R 10:	(E1)10R-06 5669



MOVIA - SL

Overview of options

Speed is of the essence in an emergency. Beacons must be easy to use while driving, especially in the case of unmarked vehicles. Thanks to its low weight and compact design, the MOVIA-SL offers the best conditions for arriving at the destination quickly and safely.

Fix mounting

Tube mounting

Magnetic fixing

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Fix mounting

PRODUCT FEATURES:

- options:
  - day/night switching (via cable)
  - day/night switching (automatic)
  - function monitoring (high)
  - analogue or CiA447 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 tube
- colours: also available in red and amber

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 protect paintwork against scratches
- tested at up to 270 km/h
- options:
  - analogue or CiA447 version available
  - 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 optionally available

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-06 5669

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Bicoloured LED beacons

switchable between blue and amber

MOVIA - SL

PRODUCT FEATURES:

- available as fix mounting or magnetic fixing
- fix mounting/CiA447: colour switching via signal line
- magnetic fixing: colour switching via a switch on the universal plug
- clear lamp dome
- protective cover optionally available

COMET LED

PRODUCT FEATURES:

- available as fix mounting or magnetic fixing
- fix mounting/CiA447: colour switching via signal line
- magnetic fixing: colour switching via a switch on the universal plug
- clear lamp dome

Bicoloured LED beacons

switchable between blue and amber

The bicoloured MOVIA-SL and COMET LED beacons are switchable between blue and amber. The blue warning signal is used to indicate the right of way when travelling 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-06 5669	(E1) 10R-06 5669

MOVIA-SL and COMET LED VERSIONS

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

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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 fastened to the vehicle roof by means of a lockable plug-in hinge and a magnetic rubber suction cup. The universal electric plug-in hinge attachment part (ESA part) provides both a secure hold and the voltage supply for the beacon.

COMET S PRODUCT FEATURES:

- 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

Fig.:
COMET on support bracket without ESA part

COMET PRODUCT FEATURES:

- three rows of LEDs
- class I homologation
- analogue
- height: 158 mm (plus support bracket)
- colours: also available in red and amber

SUPPORT BRACKET PRODUCT FEATURES:

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

HT solutions

With the HT solutions from Hänsch you can ensure 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 half lightbar, can be mounted at the front or rear of the vehicle or integrated into the vehicle body.

The various solutions from Hänsch, consisting of 2 to 6 HT lamp bodies, allow you maximum flexibility in mounting on the vehicle body. With the Sputnik mini and Sputnik SL HT solutions, installation at the front of the vehicle ensures the earliest possible warning effect, e.g. at intersections or at exits.

Further information on HT solutions can be found on page 126.

INTEGRO Universal LED module

Sputnik mini HTB

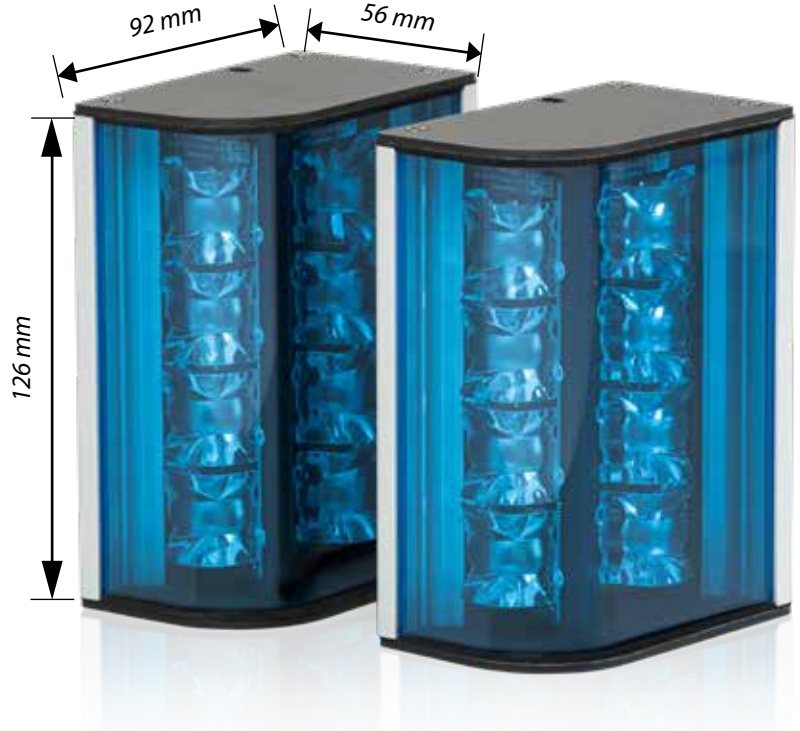
Sputnik SL HTB

Sputnik Hybrid HTB

Sputnik Flat 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 mounting versions: the compact integrated solution provides for a high warning effect and safety in road traffic.



Homologation (Germany and international):	
Light according to ECE-R 65:	HTB2 (E1) 00 3851
EMC according to ECE-R 10:	(E1)10R-06 4465

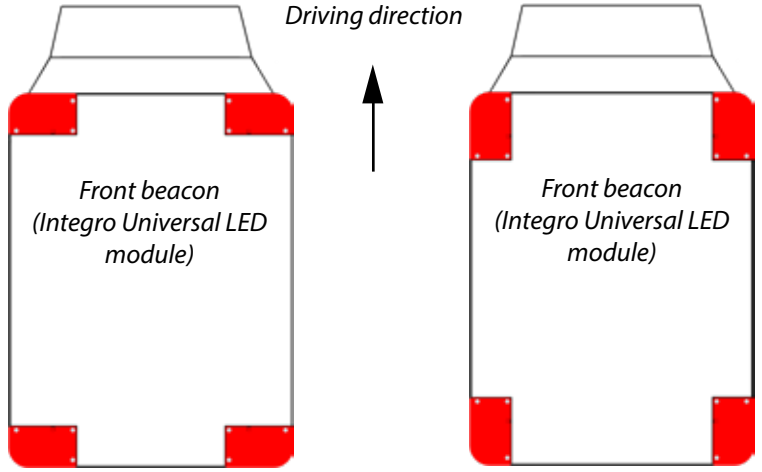
The homologation is valid only if used in pairs at the front and/or rear of the vehicle.

PRODUCT FEATURES:

- one system consists of two identical lamp modules
- including day/night switching
- 8 high-performance LEDs with wide angle optics
- integrated control electronics
- voltage: 12 V / 24 V multi-voltage
- connection for function monitoring
- 270° beam angle
- synchronisation of several modules possible
- homologation as a half beacon
- colours: also available in amber and red

INTEGRATION OPTIONS:

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



Sputnik mini HTB

The Sputnik mini LED warning system impresses with its compact dimensions and simple installation method in the round drill hole. With 2 lamp bodies, the system can be used as a front flasher. An HT solution is homologated with 6 Sputnik minis, the lamp bodies in the middle being replaceable by special Sputnik SLs or Sputnik Compacts. The beacon as an HT solution consists of several visual systems, therefore it is not a directional beacon (front flasher).

Lamp body dimensions:
27 mm x 28 mm x 29.5 mm
(diameter x height x depth)

PRODUCT FEATURES:

- very compact design for universal use
- housing: aluminium
- external electronics for up to 2 lamp bodies
- vehicle-specific HT solutions available: MB Sprinter, VW Crafter, MAN TGE, further volume models or projects on request
- various areas of application: homologation as a directional beacon and as a half beacon (functional beacons on request)

VERSIONS:

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

Sputnik mini HTB

(1)

System consisting 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
option: activation control

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 (W x H x D)
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 0.5 A at 24 V	
Peak*:	2.3 A at 12 V 1.1 A at 24 V	
*electronics with 2 lamp bodies		
Flash pattern:	synchronous strobe flash (configurable)	
Homologations: (Germany and international)		
Light according to ECE-R 65:	HTB1 (E5) 00 0064 (ver. 1) / HTB1 (E5) 00 0066 (ver. 2) / HTB1 (E5) 00 0067 (ver. 3)	
EMC according to ECE-R 10:	(E1) 10R-05 8617 (Sputnik mini) (E1) 10R-05 6845 (Sputnik SL) (E1) 10R-04 7591 (Sputnik compact)	

(2)

System consisting of:

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

Voltage: 12 V / 24 V multi-voltage
Flash pattern: synchronous, alternating
option: activation control

(3)

System consisting of:

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

Voltage: 12 V / 24 V
Flash pattern: synchronous, alternating
option: activation control

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Sputnik SL HTB

The Sputnik SL directional flashers feature 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°). In particular at intersections, the wide beam angle increases other road users' awareness, thus reducing the risk of accidents.

PRODUCT FEATURES:

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

System consisting of:

- 4 Sputnik SL lamp bodies

Technical data:	
Designation:	Sputnik SL
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0.8 A (per lamp body) 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

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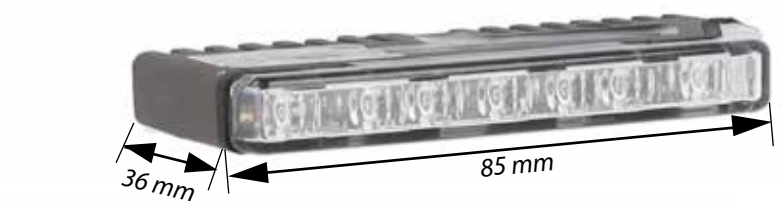
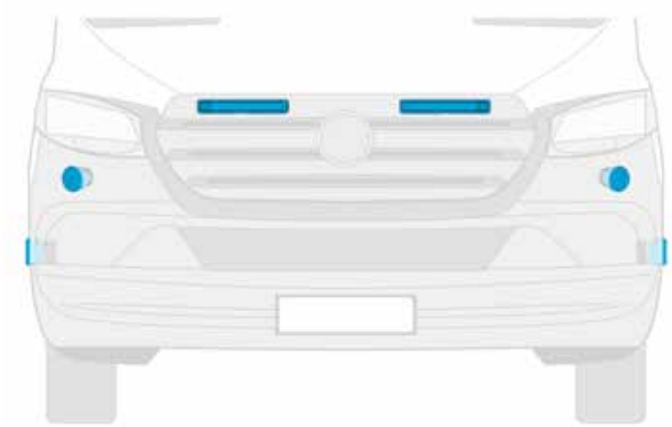
Sputnik Hybrid HTB

System consisting of:

- Version A:
  - 2 lamp bodies Sputnik Hybrid and 4 lamp bodies Spuntik mini
  - 4 lamp bodies Sputnik mini with mounting shell 10°
- Version B:
  - 2 lamp bodies Sputnik Hybrid and 2 lamp bodies Sputnik mini
  - 2 lamp bodies Sputnik mini with mounting shell 15°





Technical data:	
Designation:	Sputnik Hybrid
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0.7 A (per lamp body) 24 V: 0.3 A (per lamp body)
Type of protection:	IP6K7 / IPX9K
Homologation:	
Light according to ECE-R 65:	HTB1 (E5) 00 0094
EMC according to ECE-R 10:	(E1)10R-06 9528

Sputnik Flat HTB

Depth: 8.65 mm

Available in horizontal and vertical version

Technical data:	
Designation:	Sputnik Flat
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0.6 A (per lamp body) 24 V: 0.3 A (per lamp body)

Homologation:	
Light according to ECE-R 65:	HTB2 (E1) 00 5266 (vertical) HTB2 (E1) 00 5292 (horizontal)
EMC according to ECE-R 10:	(E1) 10R-06 9557

*Optional mounting bracket available

Hänsch®

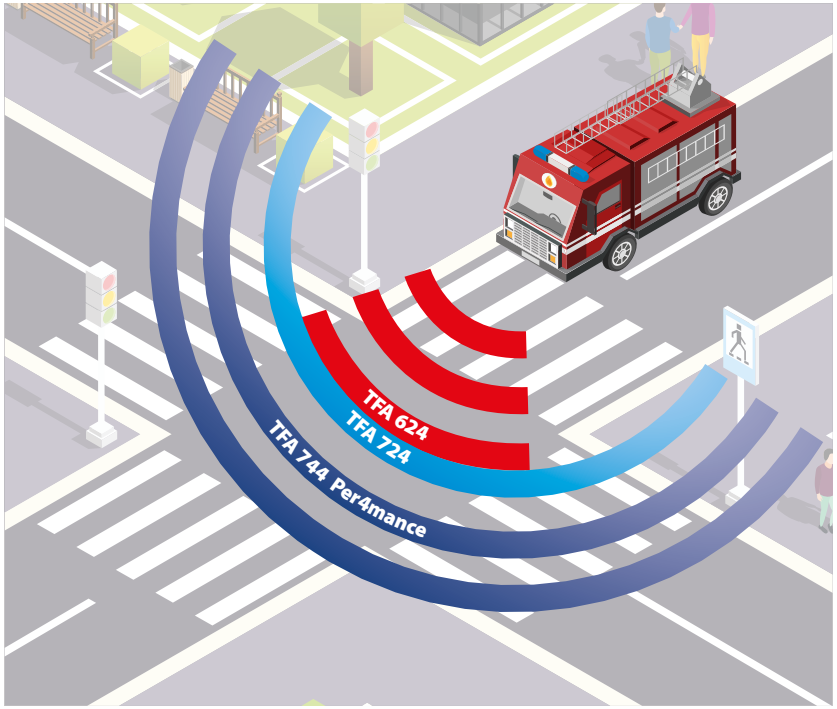

Feuerwehr 112

TFA 7X4 12 V & 24 V

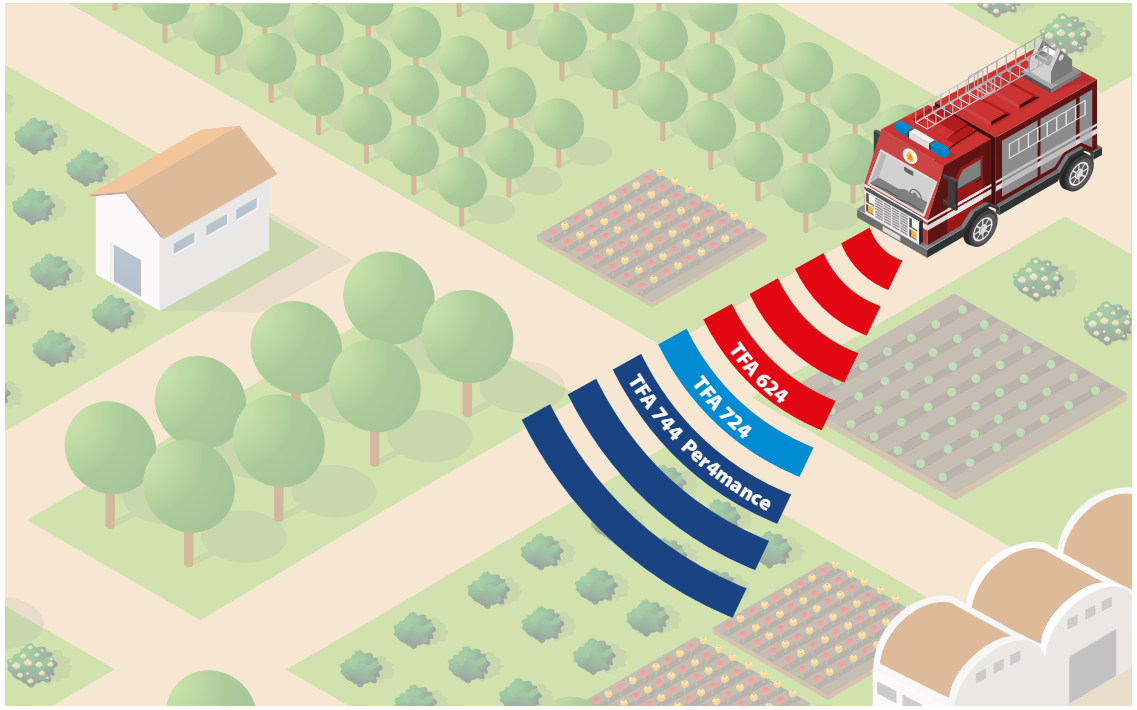
EFFECTIVE URBAN/RURAL SWITCHING

During emergency drives the acoustic signal is often perceived too late by other road users. The reason for this is the one-dimensional sound radiation in tone sequence systems used up to now. With the TFA 7X4, Hänsch is breaking new ground. In addition to optimised sound radiation for urban areas (wide pressure mode) and rural areas (direct pressure mode), the Adaptive Sound Pressure technology (ASP) also offers an extension option with increased range and intensity – the TFA 744 Per4mance. Not only that, the optimised electronic compressor signal offers a further way of increasing the awareness of road users.

URBAN DRIVING – LATERAL RADIATION
Particularly effective at critical intersections



RURAL DRIVING – RANGE & INTENSITY
Acoustic road clearer



Hänsch®

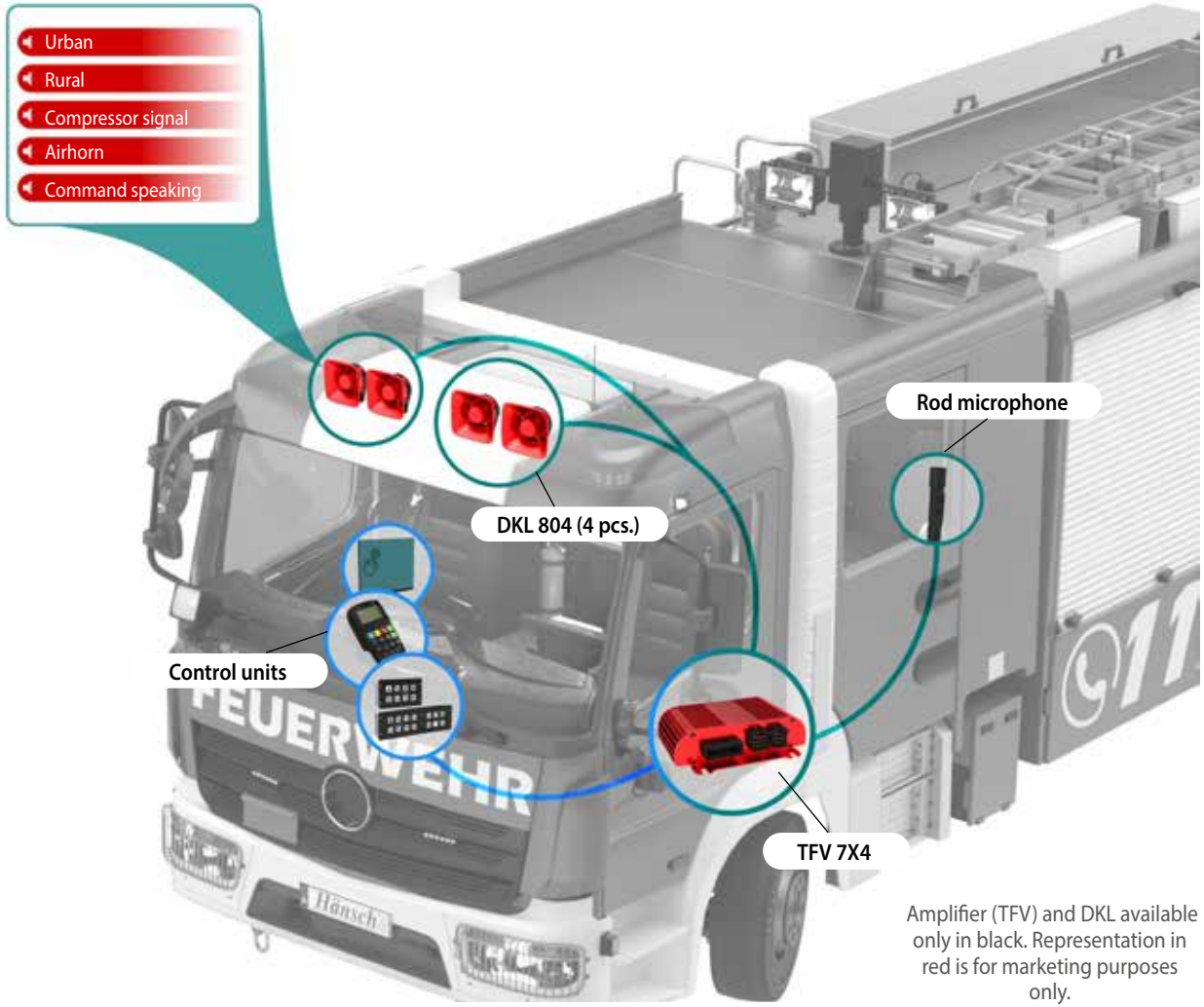
TFA 7X4 12 V & 24 V

BENEFITS

- FUNCTION IN THE SYSTEM – controllable via CiA447, FireCAN or analogue*
- ONE FOR ALL – special DIN URBAN/RURAL signals, international tones**, compressor, public address and radio intrusion as well as airhorn/bullhorn are available via a tone sequence amplifier
- MAINTENANCE-FREE – system comprising electronics and loudspeakers requires no maintenance
- WEATHER-RESISTANT – loudspeakers have been subjected to weathering and field tests for many years
- ENERGY-EFFICIENT - ¼ of the power consumption in comparison with the conventional compressor system
- REDUCED INTERIOR EXPOSURE – no pumping compressor noises disturb communication or put the emergency personnel under stress
- SIMPLE INSTALLATION – due to compact design and fewer components (e.g. no compressors or pneumatic hoses)

* Analogue-digital converter required
**YELP, WAIL, HILO, Netherlands, Austria, Italien. Others on request.

APPLICATION EXAMPLE: FIRE BRIGADE 24 V



Amplifier (TFV) and DKL available only in black. Representation in red is for marketing purposes only.

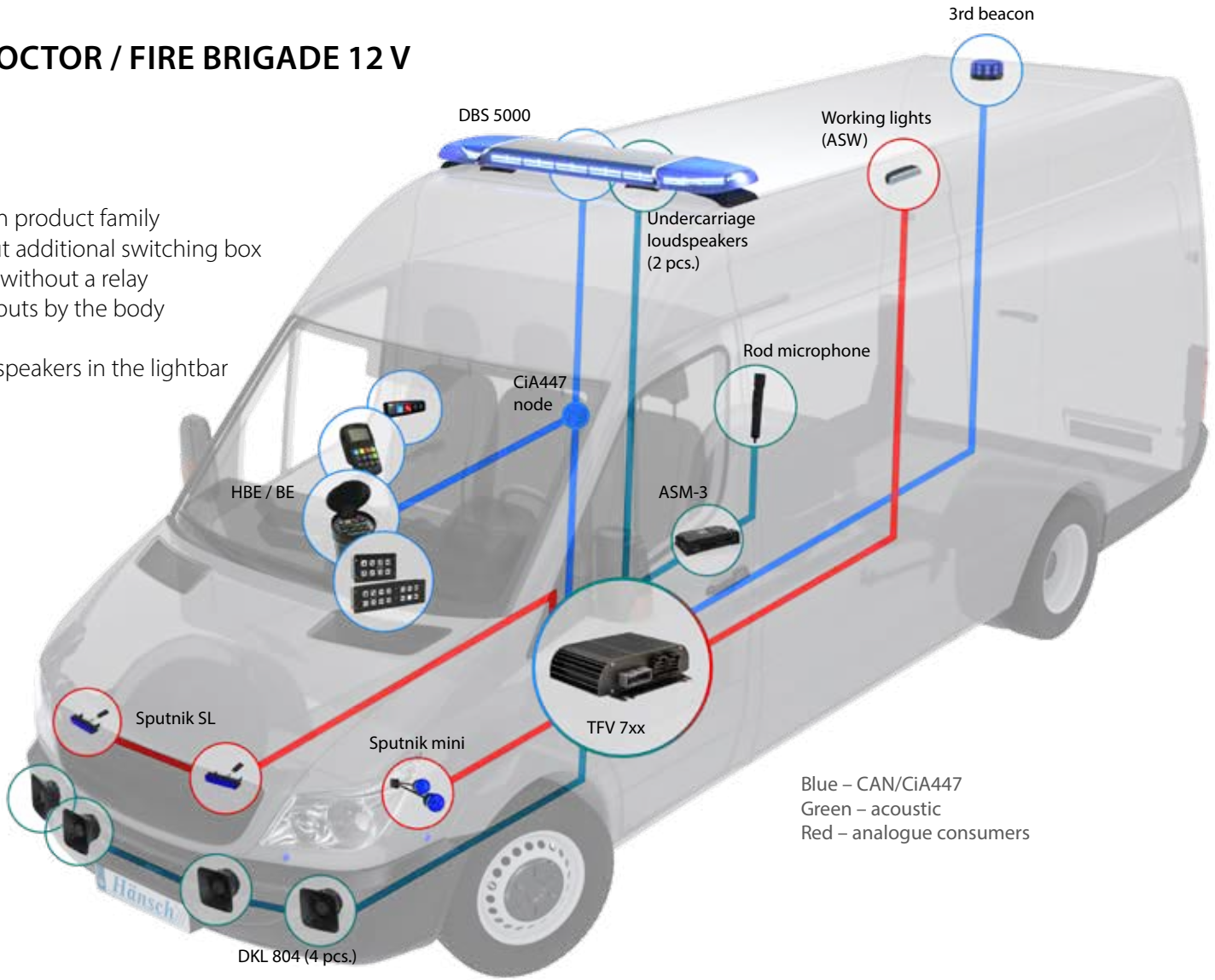
TFA 724 & 744 Per4mance

Application example

POLICE / RESCUE / EMERGENCY DOCTOR / FIRE BRIGADE 12 V

BENEFITS:

- function in the system – integrated in the Hänsch product family
- variability of the audio frequence sources without additional switching box
- load outputs for supplying analogue consumers without a relay
- flexibility through configurability of the load outputs by the body manufacturer (no coding necessary)
- public address via additional undercarriage loudspeakers in the lightbar (optional)



TFA 724 & 744 Per4mance

PRODUCT FEATURES:

- tone sequence system with 1, 2 or 4 DKL 604 or DKL 804 with various homologated tone sequence signals, among others DIN urban/rural, compressor
- wide-angle urban signal with crossing effect
- optional: an additional output stage for voice announcements via up to 2 UKL or external DKL
- 2 switchable audio frequence inputs, each with digital volume control
- 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
- optional: 5 load outputs
  - of which one can be used as beacon output (main or additional beacon/front flasher)
  - of which one can be used as radio timer output
- 2 blackbox (UDS) outputs, 500 mA
- extended diagnostic options: Error memory, I/O diagnostics, voltage, temperature, etc.

Technical data:		
Designation:	TFA 714, TFA 724 and TFA 744	
Voltage:	12 V / 24 V	
Average power consumption:	1,9 A / 1,0 A (with TFA 714 12 V / 24 V) 3,5 A / 1,7 A (with TFA 724 12 V / 24 V) 6,5 A / 3,3 A (with TFA 744 12 V / 24 V)	
Operating temperature range:	-40 °C to +80 °C	
Alarm part:	• special signal according to DIN 14610 • integrated electronic compressor signal (from TFV 724) • adjustable takedown signal (YELP) (from TFV 724) • the function conforms to DIN 14630	
Designation:	DKL 604 pressure chamber loudspeaker	DKL 804 pressure chamber loudspeaker
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
Amplifier housing dimensions:	180 mm / 47 mm/ 149 mm (W x H x D)	
Tone sequence signals:	• urban/rural signal (TA 32, DIN 14610) • compressor sound (TA 32, DIN 14610) • takedown horn (TA 32a) • YELP, WAIL, HILO, AIRHORN • AT-ambulance, AT-vienna ambulance, AT-police, Italian ambulance & police • NL 2-tone	
Homologation: (Germany and international)		
Acoustics acc. to TA32 and TA32a:	∿∿ W 25072	
EMC according to ECE-R 10:	(E1) 10R-06 9243	
Additional homologated, foreign tone sequences on request.		

Hänsch®

TFA 614 / 624 with DKL 604

The tone sequence system is designed to provide acoustic support for the light signals of emergency vehicles as defined in the road traffic licensing regulations. Penetrating and clear special signals with high efficiency as well as the option of public address and electronic compressor signalling support the use of the optical warning systems.

TFA 614 / 624 with DKL 604

Analogue version

TFA 614 with DKL 604 = tone sequence system with one pressure chamber loudspeaker type 604

TFA 614 / 624 with DKL 604

CiA447 version

TFA 624 with DKL 604 = tone sequence system with two pressure chamber loudspeakers type 604

PRODUCT FEATURES:

- highly efficient digital output stages
- on account of its efficiency, the tone sequence system type 624 is more efficient 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)
- international homologated tone sequences possible
- optimised for public address
- available in 12 V and 24 V versions
- analogue version: activation via single switch, BE 200 and BE 600 control units or hand-held control unit HBE Profi
- CiA447 version: activation via hand-held control unit HBE 300, control unit BE 304 or one of the various BE 300 built-in control units
- the functions conform to DIN 14630

Depth: 71 mm

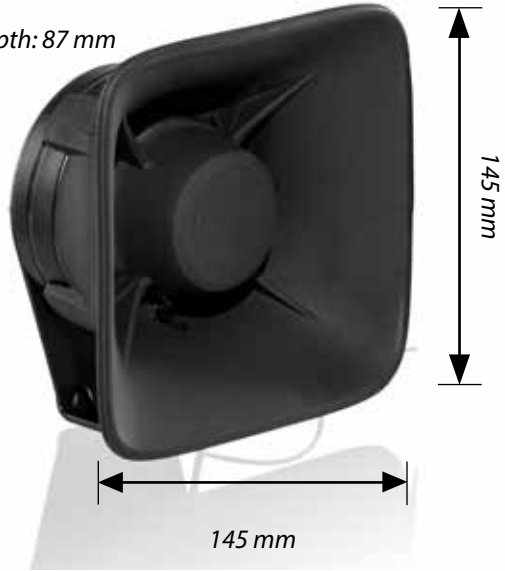
Hänsch®

TFA 614 / 624 with DKL 804
Analogue version

TFA 614 / 624 with DKL 804
CiA447 version

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

Depth: 87 mm



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

Technical data:		
Designation:	Tone sequence amplifier type 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 • integrated electronic compressor signal (TFV 624 only) • adjustable takedown signal (YELP) (TFV 624 only) • the function conforms to DIN 14630	
Designation:	DKL 604 pressure chamber loudspeaker	DKL 804 pressure chamber loudspeaker
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
Homologation: (Germany and international)		
Acoustics acc. to TA32 and TA32a:	∿∿ W 25060	
EMC according to ECE-R 10:	(E1) 10R-05 7535	
Additional homologated, foreign tone sequences on request.		

DigiREC 2.0

Emergency personnel, security staff and public utility workers often have the task of informing and warning the public. This can be required in a disaster situation, bomb disposals, in traffic or in general deployment situations. As a rule, only a public address microphone is available, which is connected to the external loudspeakers of the tone sequence system. If additional audio frequency or low-frequency sources are to be fed in, a wide range of other media are used: MP3 player, PC, Smartphone/mobile phone, 2nd rod microphone, radio with CD/USB flash drive/SD card. For these devices, the DigiREC 2.0 is the interface to the tone sequence or public address amplifier. During development, particular attention was paid to the flexibility and quality of the audio frequence signal processing.

Technical Data:	
Voltage:	12 V / 24 V multi-voltage
Homologation: (ermany and international)	
EMC according to ECE-R 10:	E1 10R-06 9609

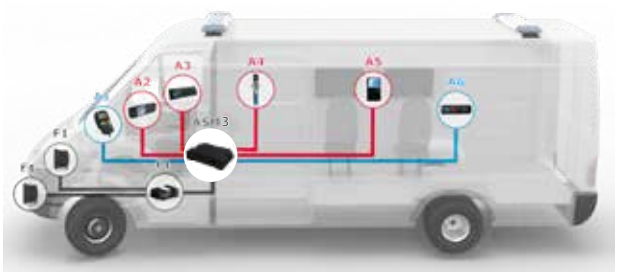
PRODUCT FEATURES:

- interfaces for many different audio sources:
  - 2 microphones - 4 audio frequency sources
  - external USB interface (MP3)
  - internal memory for MP3 files
  - in preparation: audio coupling with mobile terminal devices and SPDIF interface
- digital signal processing:
  audio quality is matched to the special signalling system
- ergonomic and intuitive operation via
  - HBE 300 buttons or menu guidance (combination also possible)
  - integration in FireCAN systems (in preparation)
- low power consumption

AREAS OF APPLICATION:

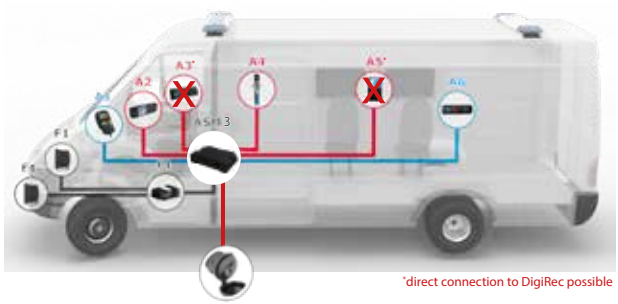
- ASM 3
- DigiREC 2.0
- Mowacom

ASM user



- 2 microphone interfaces for direct voice announcements
- live connection of up to 4 audio sources

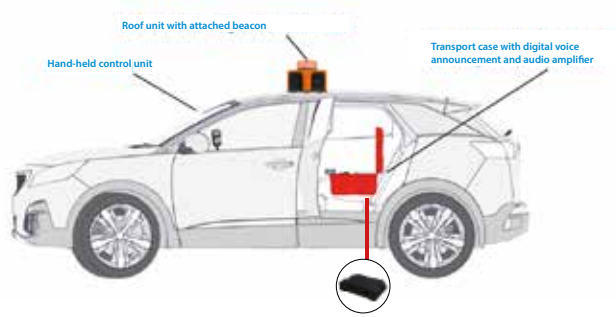
DigiREC 2.0 user



Functions of the ASM 3

- recording and playback of up to 4 voice announcements
- playback of pre-saved audio files from internal memory
- quiet playback of saved files for preselection in the interior
- playback of audio files from external USB storage device

MOWACOM user



Functions of the DigiREC 2.0

- mobile application
  - installation in a case
  - handling by 1 person
  - magnetic roof unit
  - supply via cigarette lighter socket
- special signals disaster control tones
- section switching

Directional beacons

Increased safety for all road users – especially 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 traffic travelling ahead. For this reason we recommend the use of directional beacons as a supplement to the emergency vehicle's equipment. At intersections in particular, the wide beam angle of the light considerably improves safety and the awareness of road users.

Overview of options

Sputnik SL & LED traffic advisor

Sputnik Compact & LED traffic advisor

Sputnik Flat

Sputnik Hybrid

Sputnik mini

Sputnik Flat mobile

Hänsch®

Sputnik Flat

A new dimension, despite the flat design!

Our Sputnik Flat impresses with its extremely flat design and optimal light yield. In addition, it offers a wide range of installation options on the vehicle, especially at the rear. Apart from its basic function as a directional beacon, the Sputnik Flat can also be used as a rear warning system as well as in numerous colour variants.

Depth: 8.55 mm

Technical data:	
Designation:	Sputnik Flat
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0.6 A (per lamp body) 24 V: 0.3 A (per lamp body)
Homologation:	
Light according to ECE-R 65:	XB2(E1)00 5260 (horizontal) XB2(E1)00 5263 (vertical)
Our amber Sputnik Flat directional beacons are homologated as a rear warning system according to Article 52 section 11 of the German Road Traffic Licensing Regulations. See also page 110!	
	XA2(E1)00 5261 XA1(E1)00 5262 XA2(E1)00 5264 XA2(E1)00 5265
EMC according to ECE-R 10:	(E1)10R-06 9557

PRODUCT FEATURES:

- very flat design
- flexible application possibilities, e.g. front, rear, boot, etc.
- integrated electronics for simple installation
- bicolour available for special applications
- day/night switching
- colour switching
- powerless switching and synchronisation

TECHNICAL DATA:

- control: variants available in analogue or CiA447
- mounting from front using M4 screws
- colours: blue, amber, blue/amber, blue/red, blue/green
- 12 V / 24 V multi-voltage

HOMOLOGATIONS / APPLICATION AREAS:

- directional beacon
- HT, horizontal, vertical
- X, horizontal, vertical
- rear warning system
- indicator/stop/rear light combined, horizontal, vertical
- surround lighting
- angle wedges available in 15°, 20° and 30° versions

Sputnik Flat

APPLICATION EXAMPLES

Hänsch®

Sputnik Hybrid

With its slim design, the new, narrow Hybrid front flasher from the Sputnik product family enables installation in cramped installation situations. Moreover the directional beacon has a high warning effect at intersections due to its special form.

Technical data:	
Designation:	Sputnik Hybrid
Average power consumption:	12 V: 0.7 A (per lamp body) 24 V: 0.3 A (per lamp body)
Homologation:	
Light according to ECE-R 65:	XB2 (E1) 00 5254 (horizontal) XB2 (E1) 00 5255 (horizontal) XB1 (E1) 00 5259 (wide angle homologation) XB2 (E1) 00 5271 (vertical) XB2 (E1) 00 5272 (vertical) XR2 (E1) 00 5269 (horizontal) XR2 (E1) 00 5275 (vertical) XR2 (E1) 00 5270 (horizontal)
Our amber Sputnik Hybrid directional beacons are homologated as a rear warning system according to Article 52 section 11 of the German Road Traffic Licensing Regulations. See also page 110!	
	XA2 (E1) 00 5256 (horizontal) XA1 (E1) 00 5257 (horizontal) XA2 (E1) 00 5273 (vertical) XA2 (E1) 00 5274 (vertical)
EMC according to ECE-R 10:	(E1) 10R-06 9528

PRODUCT FEATURES:

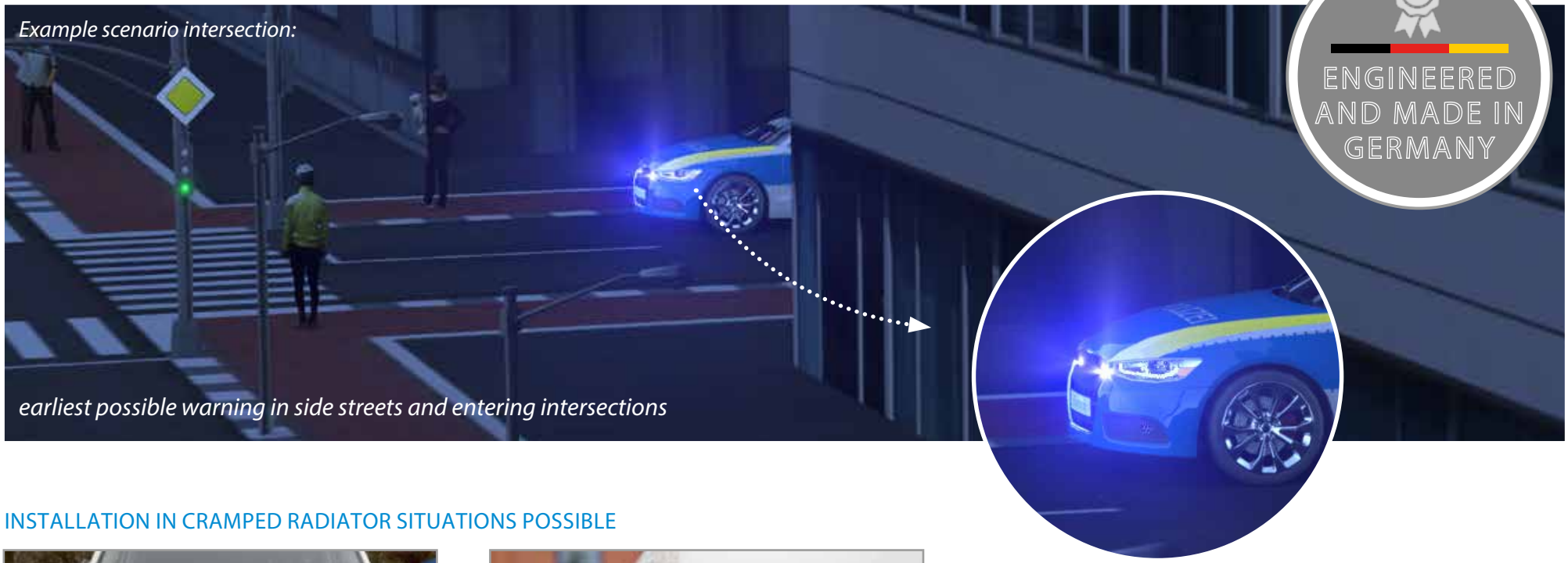
- very slim design for installation between radiator fins
- integrated intersection warner
- integrated electronics for simple installation
- bicolour available for special applications
- functions: day/night switching, colour switching, powerless switching and synchronisation
- available versions: X, horizontal, vertical
  HT, horizontal, vertical
- HT version available with Sputnik mini

TECHNICAL DATA:

- light homologations according to ECE-R65: red, blue class 2, amber class 2, blue/amber class 2 / class 1
- EMC homologation according to ECE-R 10
- control: variants available in analogue or CiA447
- mounting from behind, top/bottom using M4 screws
- vehicle-specific mounting brackets available

Sputnik Hybrid

APPLICATION EXAMPLE



INSTALLATION IN CRAMPED RADIATOR SITUATIONS POSSIBLE

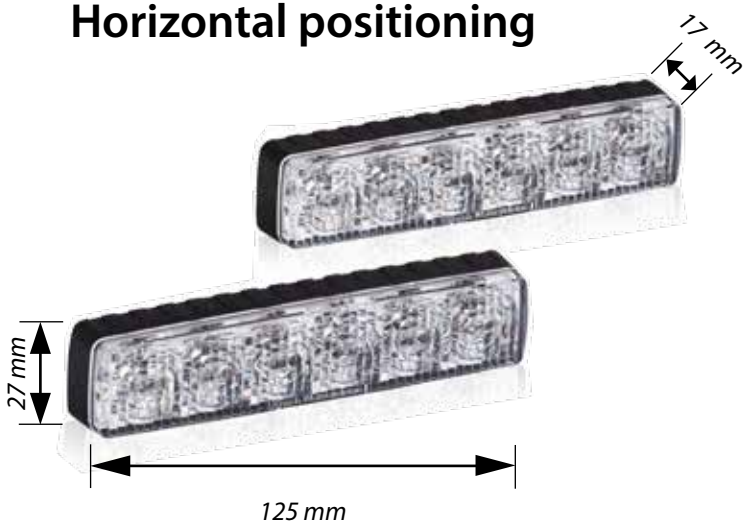
Hänsch®

Sputnik SL

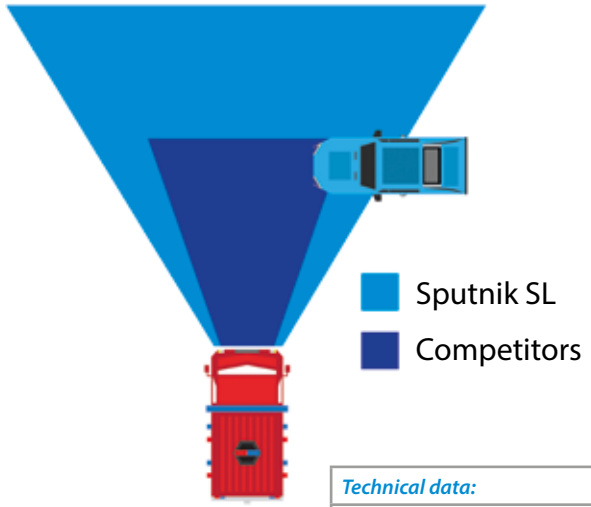
The Sputnik SL directional flashers feature state-of-the-art lighting technology. The LED lenses integrated in the cover glass guarantee maximum light output and a large beam angle (horizontal > 70°). In particular at intersections, the wide beam angle increases other road users' awareness, thus reducing the risk of accidents.

Sputnik SL

Horizontal positioning



Vertical positioning



PRODUCT FEATURES:

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

Technical data:		
Designation:	Sputnik SL	
Voltage:	12 V / 24 V multi-voltage	
Average power consumption:	12 V: 0.8 A (per lamp body) 24 V: 0.6 A (per lamp body)	
Type of protection:	IP6K7 / IPX9K	
Homologation:		
Light according to ECE-R 65:		
Horizontal	XB1 (E1) 00 3568 (blue)	XB2 (E1) 00 3569 (blue, Class 2)
Vertical	XB1 (E1) 00 3756 (blue)	XB2 (E1) 00 3759 (blue, Class 2)
Our amber Sputnik SL directional beacons are homologated as a rear warning system according to Article 52 section 11 of the German Road Traffic Licensing Regulations.		
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-06 6845	

Hänsch®

LED traffic advisor

The traffic advisor is optionally available with 4 to 7 lamp bodies. With its amber light, the traffic advisor alerts vehicles following behind of dangers in all weather and visibility conditions.

VERSION:

- installation optionally with 4 to 7 LED lamp bodies (amber)
- low power consumption (important for providing safety without motor operation)

Sputnik Compact

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

Technical data:	
Housing:	Zinc die casting, coated
Diffuser	PC
Type of protection:	IP65
Voltage:	12 V / 24 V multi-voltage
Avg. power consumption:	0.5 A at 12 V 0.3 A at 24 V
Permanent light:	0.55 A at 12 V 0.34 A at 24 V
Homologation: (Germany and international)	
EMC according to ECE-R 10:	(E1) 10R-04 7591 Sputnik Compact (E1) 10R-06 8548 BE 304 (X)

*Running light function only permitted in Germany with special approval

Sputnik SL

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

Technical data:	
Designation:	Sputnik SL
Voltage:	12 V / 24 V multi-voltage
Flash frequency:	> 2 Hz
Average power consumption:	12 V: 0.8 A (per lamp body) / 24 V: 0.6 A (per lamp body)
Type of protection:	IP6K7 / IPX9K
Homologation: (Germany and international)	
EMC according to ECE-R 10: EMC according to 72/245/EEC	(E1) 10R-05 6845 Sputnik SL [e1] 03 3477 BE 200

Sputnik Compact

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

Overview of types:

Surface mounting

Rack mounting

*depth after installation

VERSIONS:

- available in rack-mounting or surface mounting options
- rear warning light available with 0° or 0° - 24° beam angle
- working light available with 0° or 0° - 24° beam angle
- information on special HT solutions in combination with Sputnik mini can be found on pages 22 & 23

VERSATILE APPLICATIONS:

- rear warning light (blue) in the boot lid when the lightbar is covered
- directional beacon with a main radiation direction, e.g. front flasher (blue), rear flasher (blue)
- rear warning system (according to Article 53a, section 3 German Road Traffic Licensing Regulations) for securing a stationary vehicle to the rear (amber) (mounting in the vehicle)

Hänsch®

OTHER OPTIONS:

- rear warning system according to Article 52, section 11 (German Road Traffic Licensing Regulations) for securing a stationary blue-light vehicle to the rear (amber) (mounting outside in the upper area of the tail)
- direction indicator and hazard warning lights (amber)
- rear and brake light (red)
- rear fog lamp (red)
- lighting (white permanent light)
- also available in green

Technical data:		
Housing:	Zinc die casting, coated	
Diffuser	PC	
Type of protection:	IP65	
Voltage:	12 V / 24 V multi-voltage	
Avg. power consumption:	0.5 A at 12 V 0.3 A at 24 V	
Permanent light:	0.55 A at 12 V 0.34 A at 24 V	
Homologation: (Germany and international)		
Rear warning light:	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-R 6 (amber)	01 2a (E1) 4109
Rear/brake light:	ECE-R 7 (red)	02 R1-S1 (E1) 4109
Rear fog lamp:	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

* Our Sputnik Compact amber directional beacons are homologated as a rear warning system according to Article 52 section 11 of the German Road Traffic Licensing Regulations.

Sputnik mini

The Sputnik mini LED warning system impresses with its compact dimensions and simple installation method in the round drill hole.
With 2 lamp bodies, the system can be used as a front flasher.

Lamp body dimensions:
27 mm x 28 mm x 29.5 mm
(diameter x height x depth)

PRODUCT FEATURES:

- very compact design for universal use
- housing: aluminium
- external electronics for up to 2 lamp bodies
- X-homologation
- also available in amber and red
- also usable as front and/or rear flashers with two lamp bodies

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 (W x H x D)
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 0.5 A at 24 V	
Peak*:	2.3 A at 12 V 1.1 A at 24 V	
*electronics with 2 lamp bodies		
Flash pattern:	synchronous strobe flash (configurable)	
Homologations: (Germany and international)		
Light according to ECE-R 65:	XB1 (E5) 00 0068 (K1)	
	XB2 (E5) 00 0070 (K2)	
	XR2 (E5) 00 0092	
EMC according to ECE-R 10:	(E1) 10R-05 8617	

Hänsch®

Sputnik Flat mobile

Our Sputnik Flat mobile is an additional directional warning system for placement behind the windshield to increase the forward-directed warning effect at the rear-view mirror height of the vehicle travelling in front. It can be used both in civil vehicles as an effective mobile front flasher and as a supplement to the permanently installed beacon systems of an emergency vehicle.* Due to the design of the housing, the tilt angle of the light can be adapted to the windshield, ensuring dazzle-free operation. In addition, occupant protection was taken into account in compliance with ECE-R21.

PRODUCT FEATURES:

- electronics completely integrated in the lamp body
- analogue supply via universal (UN) or metal elbow plug (KA)
- on request: CiA controllable, multi-colour variants
- field-tested, simple and fast fixing to the windshield with two suction cups
- optional: protective cover made of soft shell or synthetic leather (fireproof) for the discreet accommodation of the black lamp unit in the vehicle

Technical data:	
Designation:	Sputnik Flat mobile
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0.6 A (per lamp body) 24 V: 0.3 A (per lamp body)
Dimensions:	232 x 115 x 67 mm
Weight:	approx. 250 g (without cable)
Homologation: (Germany and international)	
Light according to ECE-R65	XB2(E1)00 5260 (beacon itself is type-approved) XA2(E1)00 5261 (beacon itself is type-approved)
EMC according to ECE-R10	(E1)10R-06 9557

*the warning system is not homologated according to the German Road Traffic Licensing Regulations. Permission for use in the vehicle must be clarified or obtained by way of a special permit by the user/using authority in advance

Lightbar systems

Hänsch®

Highest safety through perfection

Nowadays, Hänsch lightbar systems are an indispensable piece of equipment for police, fire brigade and rescue service vehicles. A maximum warning effect is achieved through the use of state-of-the-art lighting technology, thus increasing safety for all road users. All lightbar systems are available in different lengths and versions. They are modular and feature a wide range of functions.

DBS 850

reddot award 2017
winner

DBS 5000

reddot design award
winner 2013

DBS 4000

DBS 2000/3000 LED

DBS 850 divided

Emergency services have been relying on the design and reliability of the divided roof lightbar systems from Hänsch for over 20 years. The DBS 850 is a completely new development and is the successor to the DBS 975. Cover glasses and lamp domes have been given a modern appearance with clear contours, while the aluminium profile and mounted covers have deliberately been kept dark. To meet the highest demands for the light intensity, the rod paraboloid lens familiar from the DBS 5000 is used. The light modules behind it can have up to three colours and are designed to be multifunctional via the internal bus. The wiring and mounting options are compatible with the DBS 4000/DBS 5000 systems.

Customisable

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

Variety of mounting options

- fast and easy mounting options for flat or curved vehicle roofs

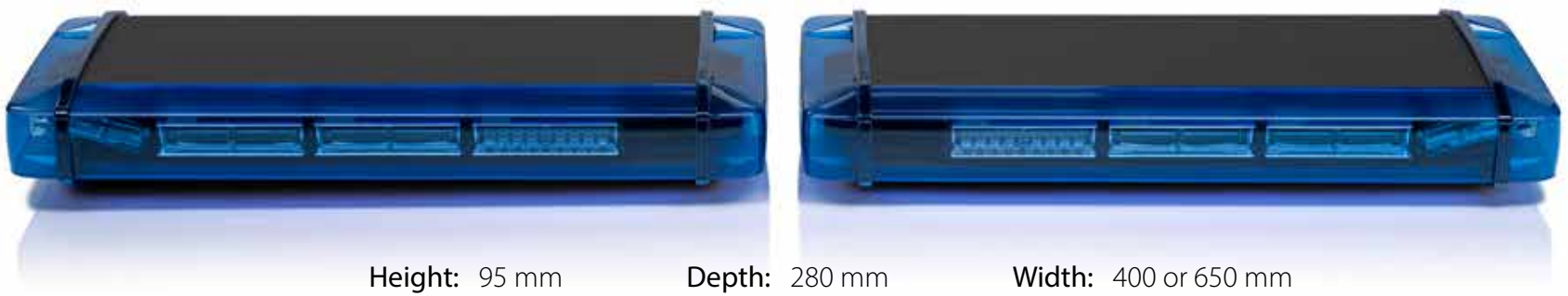
Simple control concept

- control/operation –
  via CiA447, FireCAN or analogue

Variety of lengths

- lengths: 2 x 400 or 2 x 650 mm

DBS 850 divided



Height: 95 mm **Depth:** 280 mm **Width:** 400 or 650 mm

PRODUCT FEATURES

- controller: CiA447, FireCAN and analogue
- 12 V / 24 V multi-voltage
- automatic day/night switching
- main beacon is multicolour-capable (e.g. switchable between blue and amber)
- middle module is multicolour-capable (up to three different colours per module)
- extension of the light functions with middle modules
- use of the roof mounting systems of DBS 4000/5000
- EMC according to ECE-R 10

RANGE OF FUNCTIONS AVAILABLE*

- blue beacon class II (according to ECE-R 65)
- amber beacon class II (according to ECE-R 65)
- amber direction indicator (front/rear) (according to ECE-R 148)
- power flash (according to TA13a)
- additional flashers
- lighting for the surrounding area (alley lights 20°)
- rotating light function available
- search light (alley lights 0°)
- working lights
- rear warning system

*May be limited depending on control

DBS 850

The DBS 850 product family includes not only the divided version, but also the full-length version. The latter also impresses with its new, state-of-the-art design with clear contours and the technical innovations.

Customisable
- fitted using a modular system
- flexibly adaptable to individual needs

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

Simple control concept
- control/operation – via CiA447, FireCAN or analogue

Variety of lengths
- lengths: 400 mm, 650 mm, 1100 mm, 1200 mm, 1400 mm, 1600 mm, 1800 mm

DBS 850

Height: 95 mm **Depth:** 280 mm **Width:** 400-1800 mm

PRODUCT FEATURES

- controller: CiA447, FireCAN and analogue
- 12 V /24 V multi-voltage
- automatic day/night switching
- main beacon consisting of 4 corner modules
- main beacon is multicolour-capable (e.g. switchable between blue and amber)
- middle module is multicolour-capable (up to three different colours per module)
- extension of the light functions with up to 12 middle modules
- use of the roof mounting systems of DBS 4000/5000
- EMC according to ECE-R 10

Homologation:	
Light according to ECE-R 65:	TB2 (E1) 00 5258 DBS 850-B (blue)
Rotating light: Light according to ECE-R 10:	TB2 (E1) 00 5281 (blue), TA2 (E1)00 5282 (amber) TA1(E1)00 6027 (amber beacon blue lens)
Light according to TA13a:	∿∿ K 2089 power flash (blue)
EMC according to ECE-R 10:	(E1)10R-06 9655
Direction indicator: Light according to ECE-R 6:	1(E1)148R00 0288 (front) / 2a(E1)148R00 0288 (rear)
Rear warning system: Light according to ECE-R 65:	XA1(E1)00 5279

RANGE OF FUNCTIONS AVAILABLE*

- blue beacon class II (according to ECE-R 65)
- amber beacon class II (according to ECE-R 65)
- amber rear warning system (according to ECE-R 65)
- amber beacon behind blue lens class I (according to ECE-R 65)
- amber direction indicator (front/rear) (according to ECE-R 148)
- power flash (according to TA13a)
- additional flashers
- command vehicle light red or green
- traffic advisor (running light)**
- rotating light function available
- lighting for the surrounding area (alley lights 20°)
- search light (alley lights 0°)
- working lights

*May be limited depending on control
** Traffic control unit only permitted with special approval

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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 increases road users' awareness 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 with low clearance heights.

reddot award 2017
winner

Customisable
- fitted using a modular system
- flexibly adaptable to individual needs
- multi-colour middle modules

Aerodynamic housing
- low wind resistance and reduced noise level
- low-profile design

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

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

Simple control concept
- digital control via CiA447 or FireCAN
- converters for analogue control available

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

Multi-colour middle modules
- switchable between blue, amber and white

DBS 5000 multi-colour middle modules (switchable)

3 IN 1

OUR DBS 5000 MULTI-COLOUR MIDDLE MODULES ARE SWITCHABLE!

BLUE

Driving to the destination
with maximum blue light

AMBER

Security to the rear
with rear warning system

WHITE

Working light for
illuminating the site

DBS 5000

RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter detection)
- LED command vehicle light (red or green)
- direction indicator* front, rear, front & rear
- automatic day/night switching
- undercarriage loudspeaker to support public address
- rotating light function available
- search lighting (alley lights 0°)
- lighting for surrounding area (alley lights 20°)
- working lights
- additional flashers
- rear warning system

} combination also possible

- power flash
- red stop flash
- traffic advisor (special approval required)
- convoy function (control required)
- integration of compressor horns possible
- also available with clear lamp domes

*with CiA447, an I/O box for reading the analogue signals is required.

Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

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 / TB2 (E1) 00 5238
EMC according to ECE-R 10:	(E1) 10R-06 7981
Rotating light: Light according to ECE-R 10:	TB2 (E1) 00 5284 (blue) / TA2 (E1) 00 5285 (amber)
Direction indicator: Light acc. to ECE-R 6:	01 1 (E1) 4453 (front) / 01 2a (E1) 4453 (rear)
Rear warning system: Light acc. to ECE-R 65:	XA1 (E1) 00 4471 / XA2 (E1) 00 5240
Power flash: light according to TA13a:	∿∿ K 1427
Takedown flash according to TA13b:	∿∿ K 1927

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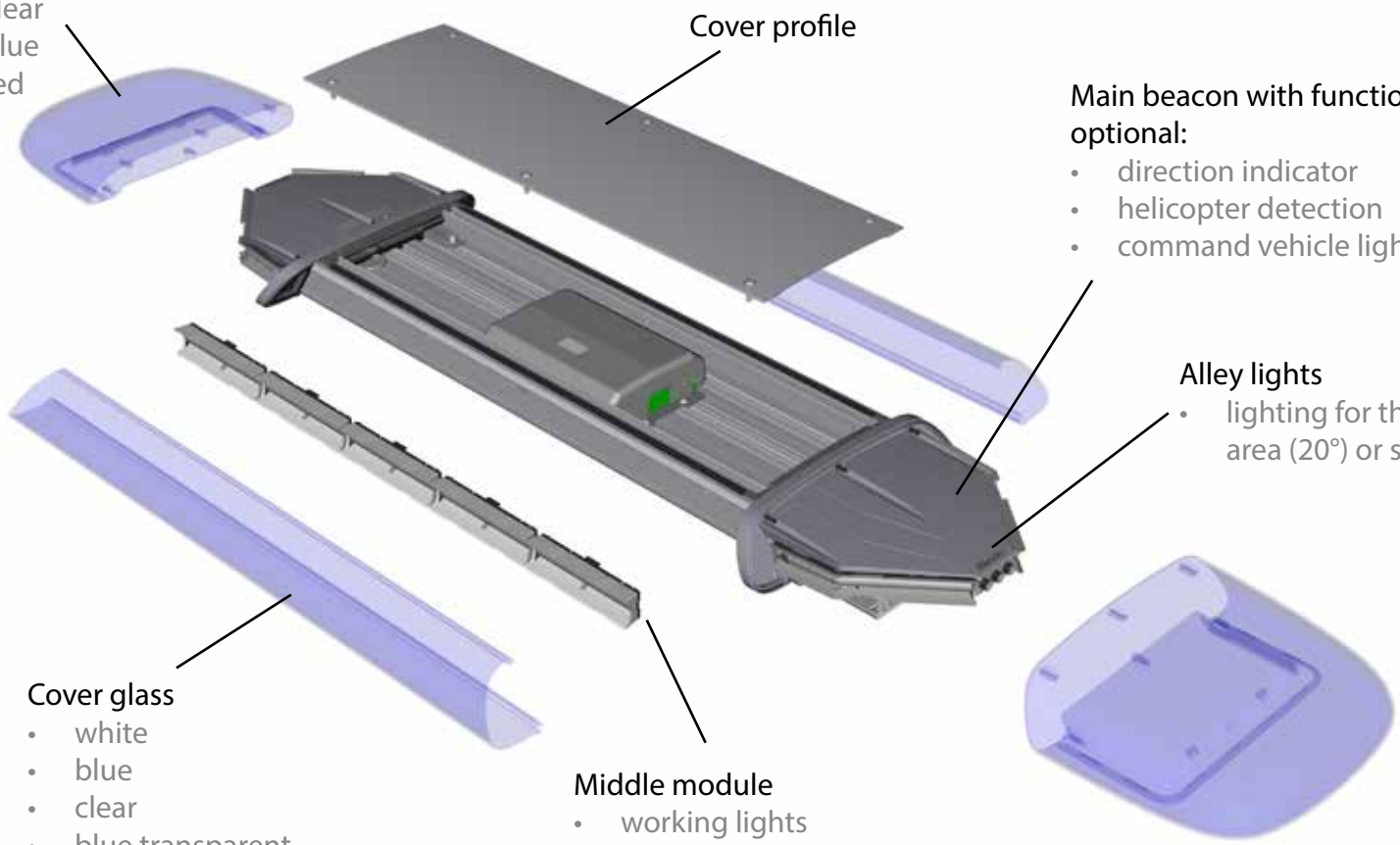


Lamp dome
- clear
- blue
- red

Cover profile

Main beacon with function monitoring, optional:
- direction indicator
- helicopter detection
- command vehicle light

Alley lights
- lighting for the surrounding area (20°) or search light (0°)

Cover glass
- white
- blue
- clear
- blue transparent

Middle module
- working lights
- additional flashers
- command vehicle light (red or green)
- rear warning system
- power flash
- (or combinations)

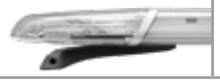
DBS 5000

Basic lightbar

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

Main beacon (HKL)	
Function	
Main beacon (blue)	• high-performance LEDs with wide angle optics • class 2 homologation with automatic day/night switching • integrated function monitoring • flash pattern: strobe flash • optional: signal light: command vehicle light, green, four-fold on the main beacons (flashing) • optional: helicopter detection, 4-fold, rotating infrared, for night vision devices • optional: direction indicator, front and rear, in the main beacons* • also available with clear lamp domes

Control module (KM)	
Function	
Digital control	• serial control via 2-wire cable for CiA447 control units (e.g. BE 300, HBE 300) • compatibility with other control units on request
FireCAN	• serial control for FireCAN control units
Analogue control	• converters for analogue control available • analogue control via signal cable • 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 versions available

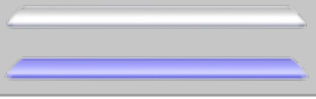
*with CiA447, an I/O box for reading the analogue signals is required.

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

Options

Acoustic		
Function		
Undercarriage loudspeakers	• undercarriage loudspeakers directed towards the rear and/or front for public address • external amplifier and cable harness required	• 12 V • 24 V
Martin compressor system	• external Martin compressor with 4 diaphragm acoustic horns mounted on the lightbar	• 12 V • 24 V

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

Cover glass		
Description		
	Cover glass in full colour: • white (RAL 9010) • blue (RAL 5017)	
	Cover glass, transparent: • clear • blue transparent	• clear or tinted transparent cover glass • required when mounting middle modules

DBS 5000

Middle modules, switchable between blue, amber and white

Options – front mounting

Configuration example

Product	Product / colour	Product / colour	Product / colour	Product / colour	Product / colour	Product
HKL	ZB / blue	ZB / blue	PB / blue	ZB / blue	ZB / blue	HKL
	ASW / white	ASW / white		ASW / white	ASW / white	
	● ○	● ○	●	● ○	● ○	

HKL: main beacon
ZB: additional flashers
ASW: working lights
PB: power flash

Function			
Additional flashers (ZB; pair) max. 3 pairs, depending on the length	• 9 blue LEDs (unicoloured module) or 6 blue LEDs (multicolour module) in the reflector housing • directional • synchronisation with respective main flasher • reduced in night mode	Power flash	• a module consists of 9 blue LEDs in the reflector housing • directional • optimised for distance effect
Working light (0°) (up to 4 pcs. per lightbar)	• 9 white LEDs (unicoloured module) or 6 white LEDs (multicolour module) in the reflector housing • selectable mounting position • 1500 lumens	Command vehicle light	• a module consists of 9 LEDs in the reflector housing • red or green • labelling of command vehicle

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Middle modules, switchable between blue, amber and white

Options - rear mounting

Configuration example

Product	Product / colour	Product / colour	Product / colour	Product / colour	Product / colour	Product
HKL	ZB / blue	ZB / blue	ASW / white	ZB / blue	ZB / blue	HKL
	HWS / amber	HWS / amber		HWS / amber	HWS / amber	
		ASW / white		ASW / white		
	🔵🟡	🔵🟡⚪	⚪	🔵🟡⚪	🔵🟡	

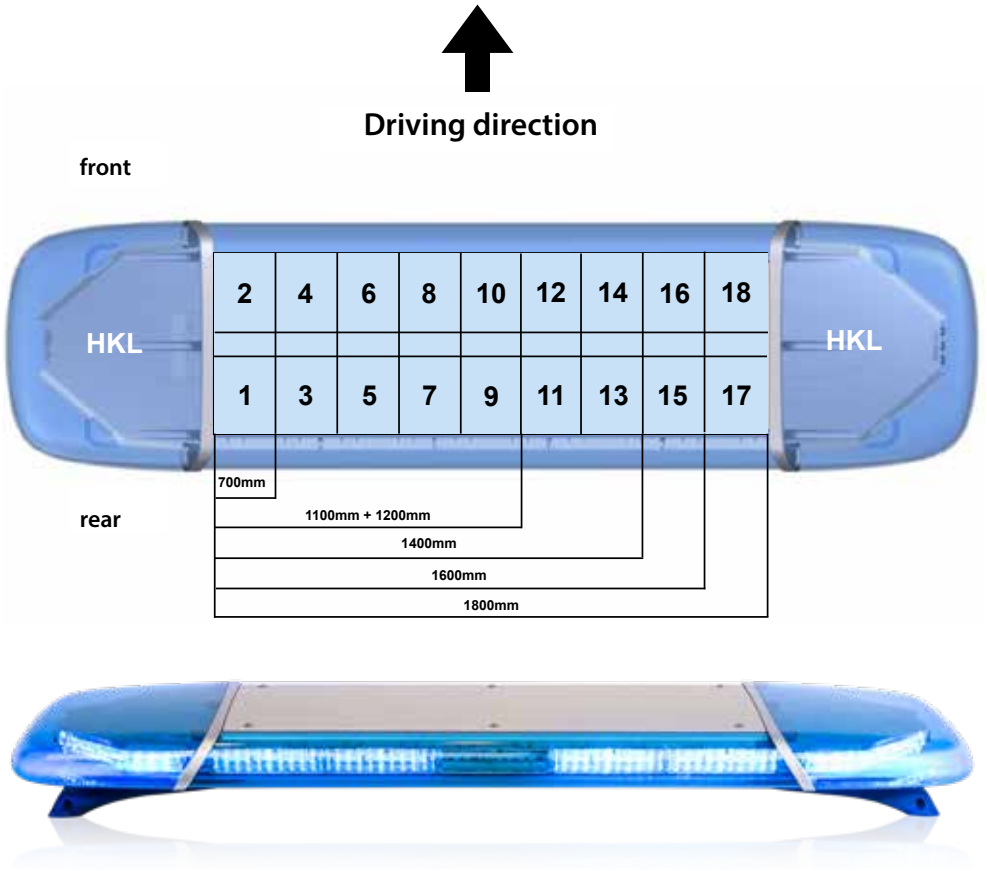
HKL: main beacon
ZB: additional flashers
HWS: rear warning system
ASW: working lights

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

*Verkehrsleiteinheit nur mit Sondergenehmigung zugelassen

DBS 5000

Special function	
Convoy	• "convoy front" switches the rear part of the main beacon and the rear additional flashers off in order not to dazzle the following traffic • "convoy rear" switches the front part of the main beacon and the front additional flashers off in order not to dazzle the traffic travelling in front • the control unit must support the "convoy" function



Overview of the module slots

APPLICATION EXAMPLES:

DBS 5000

switchable between blue and amber

The DBS 5000 bicolour lightbar system is switchable between blue and amber.
The blue warning signal is used to indicate the right of way when travelling 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:

- switchable 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
- direction indicator* front, rear, front & rear
- working lights
- blue additional flashers
- amber additional flashers
- rear warning system (amber)

} combination also possible

- search lighting (alley lights 0°)
- lighting for surrounding area (alley lights 20°)
- power flash (blue)
- red stop flash
- automatic day/night switching
- integration of compressor horns possible
- installation of undercarriage loudspeakers possible

*with CiA447, an I/O box for reading the analogue signals is required.

Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

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 TB2 (E1) 00 5238 / TA2 (E1) 00 5239
EMC according to ECE-R 10:	(E1) 10R-06 7981
Direction indicator: Light acc. to ECE-R 6:	01 1 (E1) 4453 (front) / 01 2a (E1) 4453 (rear)
Rear warning system: Light acc. to ECE-R 65:	XA1 (E1) 00 4471 / XA2 (E1) 00 5240
Power flash: light according to TA 13a:	∿∿ K 1427

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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. The optimum warning effect increases road users' awareness and ensures additional safety when in operation. Thanks to numerous selectable functions, the DBS 4000 can be adapted individually to every area of application.

reddot design award
winner 2013

Customisable
- fitted using a modular system
- flexibly adaptable to individual needs

Aerodynamic housing
- low wind resistance and reduced noise level

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

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

Simple control concept
- analogue or digital control via CiA447 or FireCAN

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

Hänsch®

DBS 4000

RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter detection)
- traffic advisor (special approval required)
- convoy function (control required)
- command vehicle light (red or green)
- integrated compressor system
- direction indicator* front, rear, front & rear
- working lights
- lighting for the surrounding area (alley lights 20°)
- search light (alley lights 0°)
- additional flashers
- rear warning system
- power flash
- red takedown flash
- undercarriage loudspeaker to support public address
- tone sequence system (TFA 614/624/7xx)
- cover glass printing
- full matrix display
- automatic day/night switching
- tube adapter in the top cover
- also available with clear lamp dome

Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

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 divided: 2x 430 mm (24 V)
Depth:	300 mm
Height:	140 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 5248 TB2 (E1) 00 3111
EMC according to ECE-R 10:	(E1) 10R-05 6209
Takedown flash: light according to TA 13b:	∿∿ K 1020
Direction indicator: light according to ECE-R 6	01 2a (E1) 3800 (rear) / 01 1 (E1) 3822 (front)
Power flash: light according to TA 13a:	∿∿ K 809
RWS: light according to TA 20:	∿∿ K 810

DBS 4000

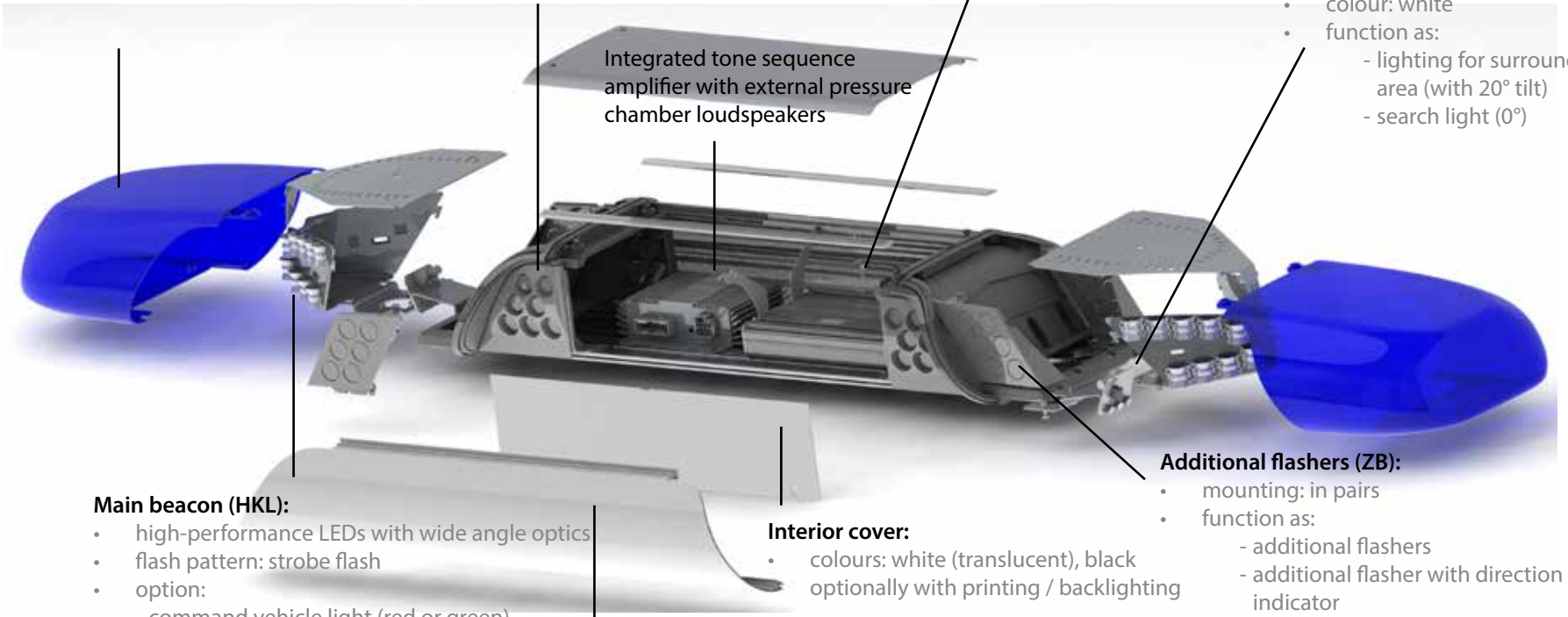
Lamp dome of the main beacon:
- colour: blue, clear or red

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

Control module (KM):
- analogue control
- digital control CiA447
- 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 external pressure chamber loudspeakers



Main beacon (HKL):
- high-performance LEDs with wide angle optics
- flash pattern: strobe flash
- option:
  - command vehicle light (red or green)
  - infrared LED

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

alternatively

Display:
- full matrix with various texts (CiA447)

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

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

Hänsch®

Basic lightbar

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

Main beacon (HKL)	
Function	
Main beacon (blue)	• high-performance LEDs with wide angle optics • class 2 homologation with automatic and manual day/night switching • integrated function monitoring • flash pattern: strobe flash • optional: signal light: command vehicle light, red or green, four-fold, on the main beacons (flashing) • optional: helicopter detection, 4-fold, rotating infrared, for night vision devices • also available with clear lamp dome

Control module (KM)	
Function	
Analogue control	• for alarm pull-twist switch, single switch and various common analogue control units (e.g. BE 200 or BE 600)
Digital control	• serial control via 2-core cable for CiA447 control units (e.g. BE 300, HBE 300) • compatibility with other control units on request
FireCAN	• serial control for FireCAN control units

Mounting options	
Rubber mouldings	• for flat or curved vehicle roofs
Mounting brackets	• universal and various vehicle-specific versions available
Flat seal	• for flat vehicle roofs

Electrical connection	
Function	
Cable outlet	• cable outlet on passenger side: standard • cable outlet on driver side • separate cable outlet (supply and signal cables are laid separately)

Options

Acoustic	
Function	
TFA 614	• integrated tone sequence amplifier with one external DKL 604 or DKL 804 pressure chamber loudspeaker
TFA 624	• integrated tone sequence amplifier with two external DKL 604 or DKL 804 pressure chamber loudspeaker
TFA 714	• integrated tone sequence amplifier with one external DKL 604 or DKL 804 pressure chamber loudspeaker (only in CiA447)
TFA 724	• integrated tone sequence amplifier with two external DKL 604 or DKL 804 pressure chamber loudspeaker (only in CiA447)
Undercarriage loudspeaker (UKL)	• undercarriage loudspeaker directed towards the rear and/or front for the support of public address • with integrated or external amplifier (combination with TFA 624/ TFV 724 only in CiA447)
Martin compressor system	• integrated or external Martin compressor with 4 diaphragm acoustic horns mounted on the lightbar. Additional information on page 56.

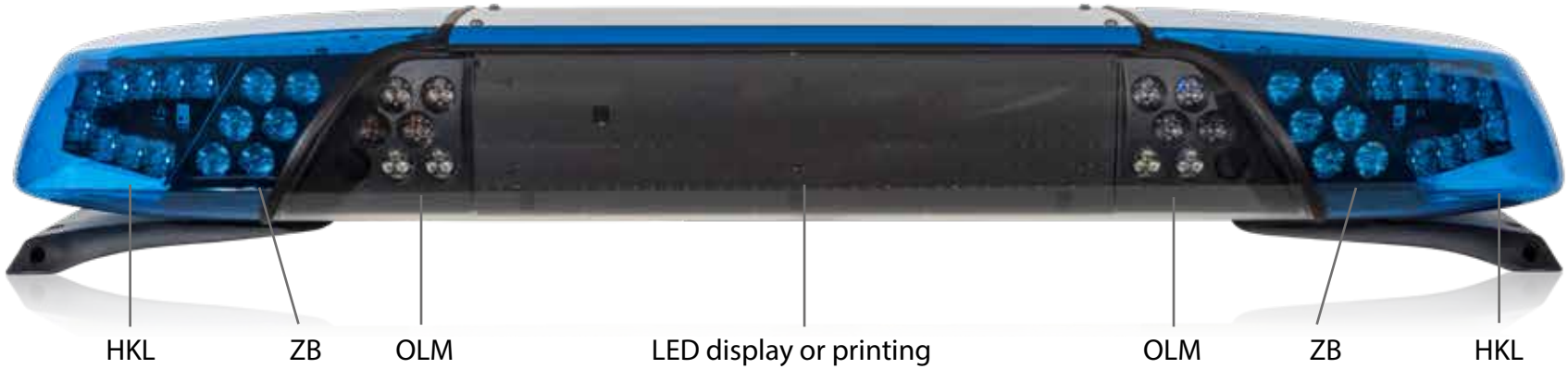
Alley lights (side lights)		
Function		
	Lighting for surrounding area	• colour: white • tilt angle: 20 ° • mounted in pairs (left and right)
	Search lights	• colour: white • without tilt angle • mounted in pairs (left and right)

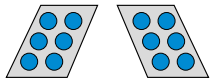
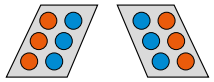
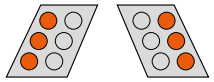
Display and printing	
Function	
Cover glass (colours: white, clear, blue and grey)	• standard: white without printing • optional: white with printing (backlighting possible) • optional: clear without printing (interior cover or display required); the clear cover glass is mandatory when OLMs are used
Interior cover (colours: white and black)	• standard: white without printing • optional: white with printing • optional: black without printing • optional: black with printing
Display	• various texts possible with digital control module

* Individual printing of the cover glasses and interior covers possible at extra cost

Options – front mounting

Configuration example

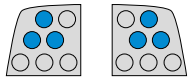
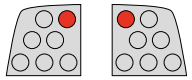
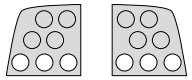
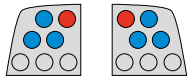
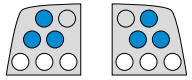
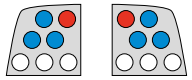
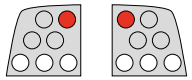


Additional flashers				
Function				possible with
ZB		Additional flashers (pair)	• consisting of 12 blue LEDs • directional • synchronisation with respective main flasher • deactivated in night mode	• 12 V • 24 V
ZB		Additional flashers with direction indicator (pair)*	• consisting of 6 blue and 8 amber LEDs • directional • additional flasher: deactivated in night mode; synchronisation with respective main flasher • direction indicator: function as direction indicators or hazard warning lights (synchronisation with vehicle direction indicator necessary)	• 12 V
ZB		Direction indicators (pair)*	• consisting of 8 amber LEDs • function as direction indicators or hazard warning lights (synchronisation with vehicle direction indicator necessary)	• 12 V

*with CiA447, an I/O box for reading the analogue signals is required.
According to ECE-R 48, additional rear direction indicators are only permissible on motor vehicles M2, M3, N2 and N3, and on trailers O2, O3 and O4.
For additional front direction indicators and in all other cases of additional rear direction indicators, please enquire to the responsible admissions office.

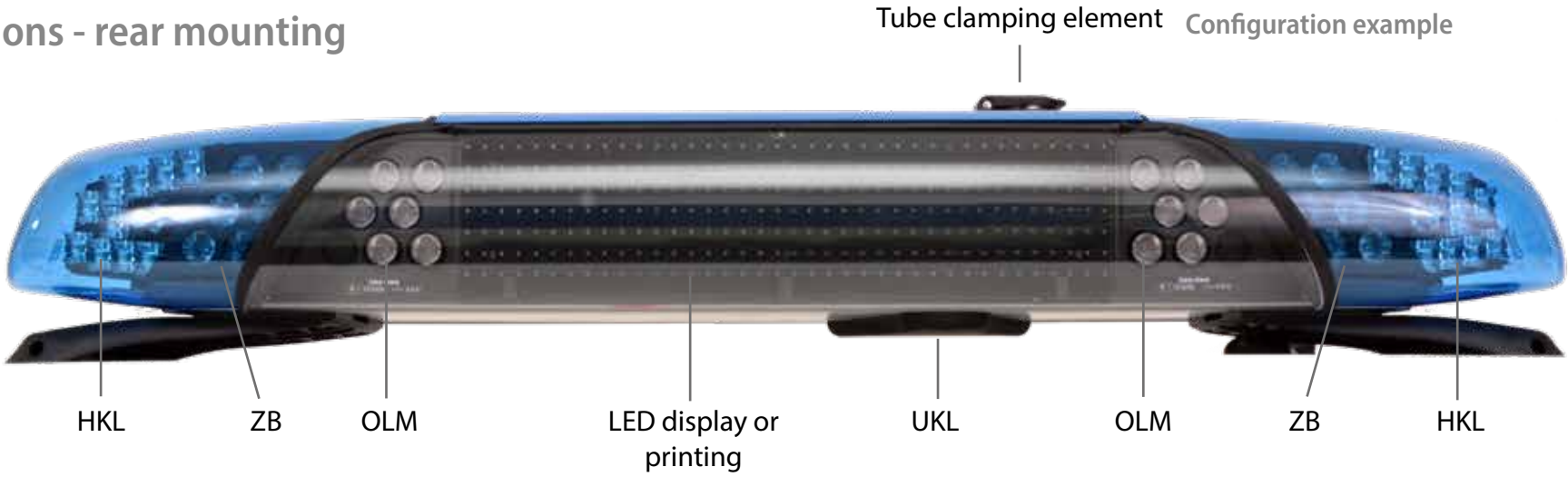
DBS 4000

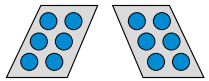
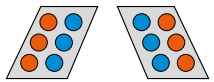
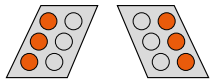
Options – front mounting

Optional light module (OLM)				
Function				possible with
OLM		Power flash (PB)	• consists of 3 blue triple lenses (9 LEDs) • standard: mounted on the left-hand side (driver side) • optional: additional PB on the right-hand side (passenger side)	• 12 V • 24 V
OLM		Takedown flash (AHB)	• permissible only in conjunction with display • consists of 1 red triple lens (3 LEDs) • standard: mounted on the left-hand side (driver side) • optional: additional AHB on the right-hand side (passenger side)	• 12 V
OLM		Working light (ASW)	• consists of 3 or 9 white LEDs per module • standard: mounted on the right-hand side (passenger side) • an additional unit can be mounted on the left-hand side (driver side) as an option • light intensity: - 600 lumens - 1000 lumens - 1500 lumens (each with a 15° tilt angle)	• 12 V • 24 V • 12 V
OLM		Power flash (PB) and takedown flash (AHB)	• see description of "power flash" and "takedown flash"	• 12 V
OLM		Power flash (PB) and working light (ASW)	• see description of "power flash" and "working light"	• 12 V • 24 V
OLM		Power flash (PB), takedown flash (AHB) and working light (ASW)	• see description of "power flash", "takedown flash" and "working light" • light intensity: 600 or 1500 lumens	• 12 V
OLM		Takedown flash (AHB) and working light (ASW)	• see description of "takedown flash" and "working light" • light intensity: 600 or 1500 lumens	• 12 V

Options - rear mounting

Configuration example

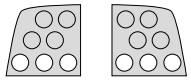
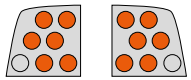


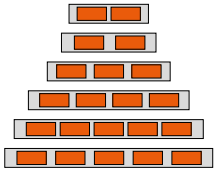
Additional flashers				
Function				possible with
ZB		Additional flashers (pair)	• consisting of 12 blue LEDs • directional • synchronisation with respective main flasher • deactivated in night mode	• 12 V • 24 V
ZB		Additional flashers with direction indicator* (pair)	• consisting of 6 blue and 8 amber LEDs • directional • additional flasher: deactivated in night mode; synchronisation with respective main flasher • direction indicator: function as direction indicators or hazard warning lights (synchronisation with vehicle direction indicator necessary)	• 12 V
ZB		Direction indicators (pair)*	• consisting of 8 amber LEDs • directional • function as direction indicators or hazard warning lights (synchronisation with vehicle direction indicator necessary)	• 12 V

*with CiA447, an I/O box for reading the analogue signals is required.

DBS 4000

Options - rear mounting

Optional light module (OLM)				
Function				possible with
OLM		Working light (ASW)	• consists of 3 or 9 white LEDs per module • standard: mounted on the right-hand side (passenger side) • an additional unit can be mounted on the left-hand side (driver side) as an option • light intensity: - 600 lumens - 1000 lumens - 1500 lumens (each with a 15° tilt angle)	• 12 V • 24 V • 12 V
OLM		Rear warning system (RWS)	• consisting of 12 amber LEDs • available exclusively in pairs (mounted left and right)	• 12 V • 24 V
A combination of the two OLM options is not possible. If required, 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* 	• One lamp body consists of 8 LEDs • lamp body: - 1100 mm: 2 lamp bodies - 1200 mm: 2 lamp bodies - 1400 mm: 3 lamp bodies - 1600 mm: 4 lamp bodies - 1800 mm: 5 lamp bodies - 2000 mm: 5 lamp bodies • rear-facing lights can also be integrated as OLMs	• 12 V • 24 V
* not combinable with OLM RWS / only possible with clear cover glass		

Options

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

DBS 4000

switchable between blue and amber

The DBS 4000 bicolour lightbar system is switchable between blue and amber.
The blue warning signal is used to indicate the right of way when travelling 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:

- switchable 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 flashers facing forwards and/or rearwards possible
- amber additional flashers facing forwards and/or rearwards possible

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:	140 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 5248 / TB2 (E1)00 3111
EMC according to ECE-R 10:	(E1)10R - 05 6209

Also available in a version tested in accordance with ICAO type C.
Further information can be found on page 118.

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DBS 2000 LED

The DBS 2000 LED warning system offers a wide selectable range of functions and powerful LED lighting technology in a sturdy housing. A maximum warning effect increases road users' awareness and ensures additional safety when in operation. The lightbar concept is rounded off by the integration of pressure chamber loudspeakers.

Customisable

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

Variety of mounting options

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

Maximum warning effect

- state-of-the-art lighting technology

Simple control concept

- analogue control

Variety of lengths

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

DBS 2000 LED

RANGE OF FUNCTIONS AVAILABLE

- rear warning system
- power flash
- integrated compressor system
- LED display
- tone sequence system (integrated or external)
- individual printing of the cover glass
- day/night switching (via signal cable)

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-06 4465

Hänsch®

Basic lightbar

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

Main beacon (HKL)	
Function	
Main beacon (blue)	• high-performance LEDs with wide angle optics (homologation according to ECE R-65) • blue lamp dome made of polycarbonate; housing made of aluminium • 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

Acoustic	
Function	
Tone sequence system	• type 614: integrated tone sequence amplifier with one integrated or external DKL 604 pressure chamber loudspeakers • type 624: integrated tone sequence amplifier with two integrated or external DKL 604 pressure chamber loudspeakers
Martin compressor system	• integrated or external Martin compressor with 4 diaphragm acoustic horns mounted on the lightbar. Additional information on page 56.

Display and printing
Function:
• standard: white housing with white front and rear light covers • optional: coating according to customer request • optional: printing according to customer request (please specify text!) • optional: with takedown display

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

Power flash (PB)
Function
• consisting of 8 blue LEDs • high distance effect • max. 2 lamp bodies

Control units

The various functions of the control units in police, fire brigade and rescue service vehicles must be as fast, reliable and easy to operate as possible. The most important functions can be accessed using the fast access buttons. Whether built-in or hand-held control unit, we offer a wide range of versions for the most diverse areas of application.

BE 300 control units

BE 200 Control unit

BE 600 Control unit

Example picture

Universal control units

HBE 300 (S) control unit

HBE Profi hand-held control unit

H2 rod microphone

BE 304 Control unit

BE 312 cupholder

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HBE 300 (S)

Both CiA447-capable warning systems and analogue supplements can be controlled with the HBE 300. In addition to variants for fire brigade/ emergency doctor, we also offer models that are specifically designed to meet the requirements of the police. Universal versions are additionally available for the fire brigade and police.

PRODUCT FEATURES:

- CiA447
- 8 fast access buttons
- 4 menu buttons
- buttons with location and activation lighting
- integrated microphone for public address option
- high-contrast wide-angle display
- easy to operate thanks to large buttons
- convenient menu navigation with self-explanatory icons
- analogue outputs for additional functions
- usable in any vehicle (even without a CiA447 bus)
- various models available

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

Technical data (without holder tray)	
Weight:	170 g
Dimensions:	66 x 124 x 24 mm (W x H x D)
Voltage:	12 V / 24 V

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HBE 300 (S)

Examples:

Functions of the fast access buttons (HBE 300)	
	Simultaneously switches the main beacons, 3rd beacon and IR flasher on and, if applicable, the takedown flash off. The night-time reduction is activated during operation by pressing and holding the button (>3 sec.).
	Simultaneously switches the main beacons, 3rd beacon and IR flasher on and, if applicable, the takedown flash off. A tone sequence can be triggered with the horn if the ignition is switched on.
	Simultaneously switches the main beacons, front flasher, 3rd beacon and IR flasher on and, if applicable, the takedown flash off. Pressing again only switches the tone sequence off.
POWER	Switches the power flash on/off when the main beacons are activated. (interlocked with the main beacons)
FRONT	Switches the front flasher on/off. (interlocked 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 when the main beacons are activated and the ignition is switched on (terminal 15). (>3 sec.)
RWS	Switches the rear warning system on/off.
STOP	Switches on the takedown display with "STOP POLICE" and the red takedown flash. The red takedown flash is not switched on if the main beacons are active.
YELP	Triggers the "acoustic stop signal" cycle if the ignition is switched on, the front takedown display ("STOP POLICE") and red takedown flash are active and the blue light is deactivated.
FOL	Switches on/off the rear-facing takedown display 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 and function
	Return to the previous menu item level. You can also switch off all active functions by pressing and holding this button.

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BE 304

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

PRODUCT FEATURES:

- compact plastic housing
- 4 function buttons for controlling CiA447-capable products
- location and activation lighting
- can be positioned horizontally or vertically (4x1 or 1x4)
- combination of several control units or as an additional keypad for other CiA447 control units
- 4-core connection cable via cable harness to CiA447 components
- surface mounted version; built-in version on request
- including analogue inputs and outputs

AREAS OF APPLICATION:

- vehicles with a reduced range of warning functions
- undercover police operation
- fire brigade vehicles with basic equipment
- amber area: building site vehicles, maintenance depots, builder's yards, general commercial vehicles, airports
- replacement for single switches in CiA447 systems

Homologation: (Germany and international)	
EMC according to ECE-R 10:	(E1) 10R-06 8548

Technical data	
Weight:	45 g
Dimensions:	84 x 26 x 15.5 mm (W x H x D)
Voltage:	12 V / 24 V

BE 312 Cupholder

The BE312 Cupholder control unit can be used both in undercover police operations and in any special-purpose vehicle where space for the installation of control units is limited. Installing the unit in a standard cup enables simple installation in an existing cup holder. It is thus ideally positioned within the driver's reach and is also easy to fix in place. The 12 function buttons can be configured and arranged according to the customer's requirements with regard to function and icons. 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 HBE 300 and BE 304.

PRODUCT FEATURES:

- 12 buttons for controlling CiA447-capable products
- optical function and error alerts
- location and activation lighting
- including analogue inputs and outputs
- secure installation in the vehicle cup holder
- housing: car ashtray black

AREAS OF APPLICATION:

- undercover operations
- simple integration into the vehicle
- installation in the cup holder
- proven control/wiring concept including FÜP of HBE 300/ BE 304

Homologation: (Germany and international) BE 312	
EMC according to ECE-R 10	E1 10R-06 9022

Technical data	
Weight:	240 g
Dimensions (closed):	86 x 125 x 86 mm (W x H x D)
Dimensions (open):	86 x 190 x 86 mm (W x H x D)
Voltage:	12 V / 24 V

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The various models in the BE 300 series offer a high degree of flexibility. In addition to a serial interface that meets the CiA447 standard, they also offer analogue outputs for controlling products that are not CiA447-compatible.

Overview of options

BE 300 control units

BE 308M

Surface-mounted housing available

PRODUCT FEATURES:

- menu-guided control unit with 8 additional function buttons
- including analogue inputs and outputs (4 inputs and 10 outputs)
- selection of various texts for the full matrix
- control of various light options (e.g. convoy, alley lights, etc.)
- installation dimensions for DIN car radio slot
- operation of the voice announcement options (e.g. selection of the sound source, volume control, etc.)

Homologation: (Germany and international) HBE 308M control units	
EMC according to ECE-R 10:	E1 10R-04 6703

BE 314

PRODUCT FEATURES:

- 14 function buttons for controlling CiA447-capable products
- including analogue inputs and outputs (4 inputs and 10 outputs)
- installation dimensions for DIN car radio slot
- usable with or without vehicle gateway
- various button assignments available
- ideal for controlling DBS 4000 and DBS 5000

Technical data (BE 308 M & BE 314)	
Weight:	160 g
Dimensions:	180 x 52 x 24 mm (W x H x D)
Voltage:	12 V / 24 V

Hänsch®

BE 300 control units

BE 308

Surface-mounted housing available

PRODUCT FEATURES:

- 8 function buttons for controlling CiA447-capable products
- including analogue inputs and outputs (4 inputs and 10 outputs)
- small housing dimensions
- usable with or without vehicle gateway
- various button assignments available
- cover for DIN car radio slot optionally available

Homologation: (Germany and international) HBE 308 control units	
EMC according to ECE-R 10:	E1 10R-04 6703

BE 300M

PRODUCT FEATURES:

- purely menu-guided control unit
- exclusively for controlling a CiA447 full matrix
- selection of various texts for the full matrix
- cover for DIN car radio slot optionally available

Technical data (BE 308 & BE 300M)	
Weight:	140 g
Dimensions:	93 x 52 x 24 mm (W x H x D)
Voltage:	12 V / 24 V

BE 200 Control unit

The BE 200 control unit enables simple and reliable operation of the warning systems. A total of 6 buttons enable the operation of the basic functions as well as other additional functions and thus offers maximum flexibility.

Homologation: (Germany and international) 200 control units	
EMC according to 72/245/EEC:	e1 03 3477

Technical data	
Weight:	180 g
Dimensions:	76 x 41.5 x 32.5 mm (W x H x D)
Voltage:	12 V / 24 V

PRODUCT FEATURES:

- 6 buttons for controlling the functions
- all buttons with backlighting and activation control
- free buttons, partly with the option of interlocking with beacons
- three indicator lamps for function monitoring
- small housing dimensions
- further predefined versions already available
- cover for DIN car radio slot optionally available

BE 600 Control unit

The BE 600 control unit ensures the reliable and simple operation of the warning systems and offers maximum flexibility.
A total of 10 buttons enable the operation of the basic and additional functions.

PRODUCT FEATURES:

- 10 buttons for controlling the functions
- public address, playback, connection of incoming radio signals to the external loudspeakers with adjustable volume
- all buttons with backlighting and activation control
- free buttons, partly with the option of interlocking with beacons
- four indicator lamps for function monitoring
- acoustic control signal for takedown display (police version)
- further predefined versions already available
- installation dimensions for DIN car radio slot

Homologation: (Germany and international) HBE 600 control units	
EMC according to 72/245/EEC:	e1 03 3478

Technical data	
Weight:	210 g
Dimensions:	170 x 41.5 x 32.5 mm (W x H x D)
Voltage:	12 V / 24 V

HBE Profi hand-held control unit / H2 rod microphone

The HBE Profi hand-held control unit is used to control the tone sequence system as well as 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/EEC:	e1 03 5235

Technical data	
Dimensions:	102.5 x 50 x 26.5 mm (W x H x D)
Voltage:	12 V / 24 V

The H2 rod microphone is used for public address with a Hänsch tone sequence amplifier, a Hänsch voice amplifier or in combination with a Hänsch ASM 2.
It impresses with improved speech quality and a higher volume control range. Feedback is reduced by a new feedback/negative feedback function. The microphone can be used from the side and no longer has to be placed immediately next to the mouth for the announcement. In addition, importance was attached during the development to achieving a cleaner PTT pressure point.

PRODUCT FEATURES:

- command speaking via push-to-talk button
- volume control
- including holder for installation in the vehicle
- connection via standard cable harness TFV 6x4 (CiA447/analogue) or via additional connection cable directly on the TFV 6x4 CiA447 or on the audio switching module (ASM 2) respectively
- operating voltage: 12 V (also usable in a 24 V vehicle voltage system in combination with TFV 6x4 / ASM 2)

Homologation: (Germany and international) H2 rod microphone	
EMC according to ECE-R 10	E1 10R-05 8887

Hänsch®

Universal control units

Some of our control units are also available in universal versions. These are freely configurable and can thus be used for any purpose. Distinction is only made here between “fire brigade/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 switched.

In addition, there is an option to choose from a large selection of preprogrammed, application-specific texts, which can quickly and simply be shown on the takedown display.

Versions of the 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 (W x H x D)

Please contact our Customer Service department for more information.

Versions of the BE 308 M Universal:

- BE 308 M - P Universal, 12 V

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

Technical data	
Weight:	160 g
Dimensions:	180 x 52 x 24 mm (W x H x D)

Universal control units

Versions of the BE 314 Universal:

Fig. FN

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

Versions of the 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 are available.
All buttons are freely exchangeable and configurable with the exception of the basic buttons.

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

Technical data	
Weight:	160 g
Dimensions:	180 x 52 x 24 mm (W x H x D)

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 (W x H x D)

Further variants on request.

Hänsch®

Undercover police operation

Undercover police operation

Fast and safely to the destination

Speed is of the essence in an emergency – operation must be quick and easy while driving, especially in the case of unmarked vehicles. We offer products that are specially tailored to undercover police operations.

Display for police operations

Mobile case system

Movia-SL LED

(see page 15)

Sputnik SL Smoky

Sputnik mini black

Sputnik Hybrid black

Sputnik Flat mobile

(see page 47)

Hänsch®

Displays for police operations

Takedown and information displays are used for targeted communication with the road users driving in front or behind. By means of various tests and display sizes, the desired information can be transmitted to those for whom it is meant. The red LEDs ensure the necessary luminosity and good readability. Control is analogue or via CiA447 with a supply voltage of 12 V.

ASG 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 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 PARCEL SHELF

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

ASG REAR

- display size: 50 mm x 234 mm or 86 mm x 431 mm
- interior or exterior 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 Sun Visor

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

Homologation:	
Takedown flash acc. to TA13b:	K 1094
EMC according to ECE-R 10:	E1 10R-05 6817

ASG Engine Bonnet

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

Homologation:	
Takedown flash acc. to TA13b:	K 1586
EMC according to ECE-R 10:	E1 10R-05 6817

ASG Flip

- display size: 75 mm x 373 mm
- number of LEDs: 7 x 38
- interior mounting
- text orientation to the front or rear
- with motorised positioning
- with red flasher

Homologation:	
EMC acc. to ECE-R 10:	E1 10R-06 9227

ASG Front

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

Homologation:	
Takedown flash acc. to TA13b:	K 1586
EMC according to ECE-R 10:	E1 10R-05 6817

Hänsch®

Displays for police operations

ASG Parcel Shelf

- display size: 86 mm x 431 mm
- number of LEDs: 7 x 38
- interior mounting
- text orientation to the rear
- with motorised positioning
- standing or suspended mounting

Homologation:	
EMC acc. to ECE-R 10:	E1 10R-05 6817

ASG Rear

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

Homologation:	
EMC acc. to ECE-R 10:	E1 10R-05 6817

ASG Big

- display size: 195 mm x 923 mm
- number of LEDs: 17 x 77
- interior mounting
- text orientation to the rear

Homologation:	
EMC acc. to ECE-R 10:	E1 10R-06 9610

PRODUCT FEATURES

- various versions and mounting methods
- high luminosity enables visibility through tinted windows
- suitable for exterior mounting, for concealed installation on the parcel shelf, for the sun visor or at the rear of the vehicle
- both analogue (max. 3 texts) and CiA447 versions available
- control of the digital version via a CiA447-capable control unit
- voltage: 12 V

ASG Flip

In both unmarked and marked police vehicles with flat blue lightbars, emergency personnel require a takedown or information display that doesn't impair their own field of vision and can be installed in vehicle with the optimum degree of concealment. The extremely slim design and the possibility of standing or suspended mounting of the Flip takedown display offer full flexibility here: the typical installation location is at the front on the dashboard at the height of the rear-view mirror of the vehicle in front.

PRODUCT FEATURES:

- full matrix with 38 x 7 LEDs (red)
- lettering height 75 mm (complies with FuStW directive)
- lettering width 375 mm
- 12 V power supply
- analogue or CiA447 control
- up to 3 texts possible with analogue control
- motorised opening/closing when text is (de)activated
- acoustic feedback for takedown texts
- for installation in the vehicle interior
- vehicle-specific mounting brackets available

Homologations: (Germany and international)	
EMC acc. to ECE-R 10:	E1 10R-06 9227

Hänsch®

ASG Big

In certain situations it is helpful if emergency services can use an oversized takedown or information display in order to grab 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. The ASG Big, mounted from inside on the tailgate, can be used for these applications.

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 performance LEDs
- lettering height 195 mm
- lettering width 923 mm
- 12 V power supply
- control via CiA447
- for installation in the vehicle interior
- universal mechanical connection options on the strut profile
- option to display the text in red, amber and red/amber

Homologation:	
EMC acc. to ECE-R 10:	E1 10R-06 9610

Mobile case system

The mobile warning system in an aluminium pilot's case provides the user with a complete visual and acoustic solution. It is particularly suitable for users who have no fixed warning system in their vehicle, but who need to operate a warning system in case of emergency.

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

PRODUCT FEATURES:

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

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

Mobile case system

Technical data:	
Designation:	***Case***
Dimensions (W x D x H):	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 / lamp dome: polycarbonate
Type of protection:	IP5K4K / IPX9K
Homologation (Germany and international):	
Light according to ECE-R 65:	TB1 (E1) 00 3139 (K1) / TB1(E1)00 3140 (K2)
EMC according to ECE-R 10:	(E1)10R-06 5669
Tone sequence system 614	
Designation:	***Tone sequence amplifier type 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:	***DKL 604 pressure chamber loudspeaker***
Number	1
Power rating:	70 W
Impedance:	4 Ω
Homologations (Germany):	
Acoustics according to TA 32	∿∿ W 25060
EMC according to ECE-R 10:	(E1)10R-05 7535

Sputnik Hybrid black

The new front flasher Hybrid black from the Sputnik product family enables due to its slim design the installation in narrow mounting situations. In addition, the directional beacon has a high warning effect in the intersection area because of its special shape.

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.

PRODUCT FEATURES:

- Light colour blue or red
- Can be adapted to the contour of the radiator grille
- Universal cable configurable as control cable, day/night cable or activation cable
- Universal bracket and various vehicle-specific brackets available for optimum alignment and easier installation
- Y cable available for easier electrical connection

Technical data:	
Designation:	Sputnik Hybrid black
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0,7 A (per lamp body) 24 V: 0,3 A (per lamp body)
Type of protection:	IP6K7 / IPX9K
Homologation:	
Light according to ECE-R 65:	
Horizontal: Vertical:	XB1 (E1) 00 5288 (blue) XR1 (E1) 00 5289 (red) XB1 (E1) 00 5287 (blue) XR1 (E1) 00 5290 (red)
EMC according to ECE-R 10:	(E1)10R-06 9528

Sputnik mini black

The Sputnik mini black LED warning system is particularly suitable for undercover police operations in an unmarked vehicle. Due to the tinted lens, the special-purpose vehicle is only clearly recognisable as such when in use, as conspicuous reflections of sun and ambient light are reduced.

PRODUCT FEATURES:

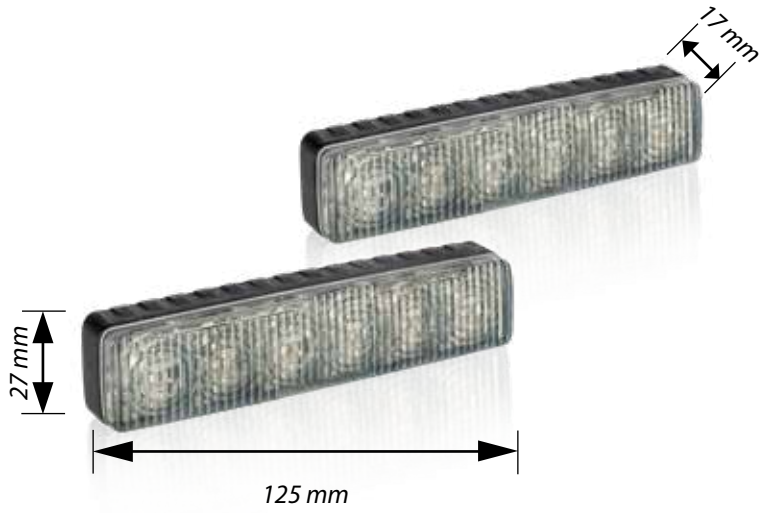
- very compact design for universal use
- light colour: blue or red
- housing: aluminium
- external electronics for up to 2 lamp bodies
- X-homologation

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 (W x H x D)
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 0.5 A at 24 V	
Peak*:	2.3 A at 12 V 1.1 A at 24 V	
*electronics with 2 lamp bodies		
Flash pattern:	Synchronous strobe flash (configurable)	
Homologations: (Germany and international)		
Light acc. to ECE-R 65:	XB1 (E5) 00 0073	
	XR1 (E5) 00 0091	
EMC acc. to ECE-R 10:	(E1) 10R-05 8617	

Lamp body dimensions:
27 mm x 29.5 mm
(diameter x depth)

Sputnik SL Smoky

The SPUTNIK SL Smoky front flashers, with the proven modern lighting technology of our Sputnik SL, are particularly suitable for undercover police operations in an unmarked vehicle. Due to the tinted lens, the special-purpose 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 in a version for horizontal installation
- two or more lamp bodies can be synchronised
- can be adjusted to the contour of the radiator grille
- complete sealing of the lamp bodies ensures insensitivity to high pressure or steam jet cleaning
- universal cable configurable as a control cable, day/night cable or activation cable
- universal holders and various vehicle-specific holders are available for optimal orientation and easy mounting
- Y-cable available for easy electrical connection

Technical data:	
Designation:	Sputnik SL Smoky
Voltage:	12 V / 24 V multi-voltage
Average power consumption:	12 V: 0.8 A (per lamp body) 24 V: 0.6 A (per lamp body)
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-06 6848

Hänsch®

CarTalker 2.0

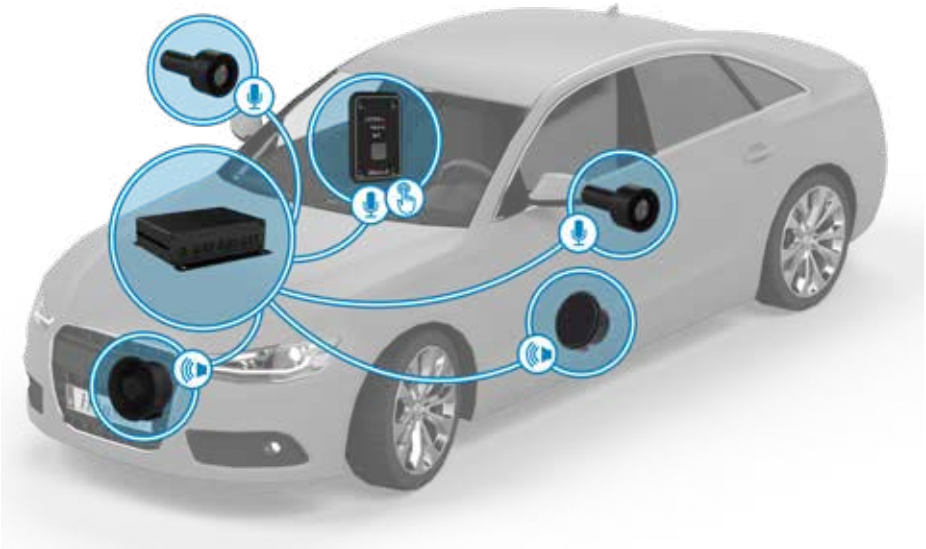
Under-threat alarm system
for armoured vehicles

CarTalker 2.0

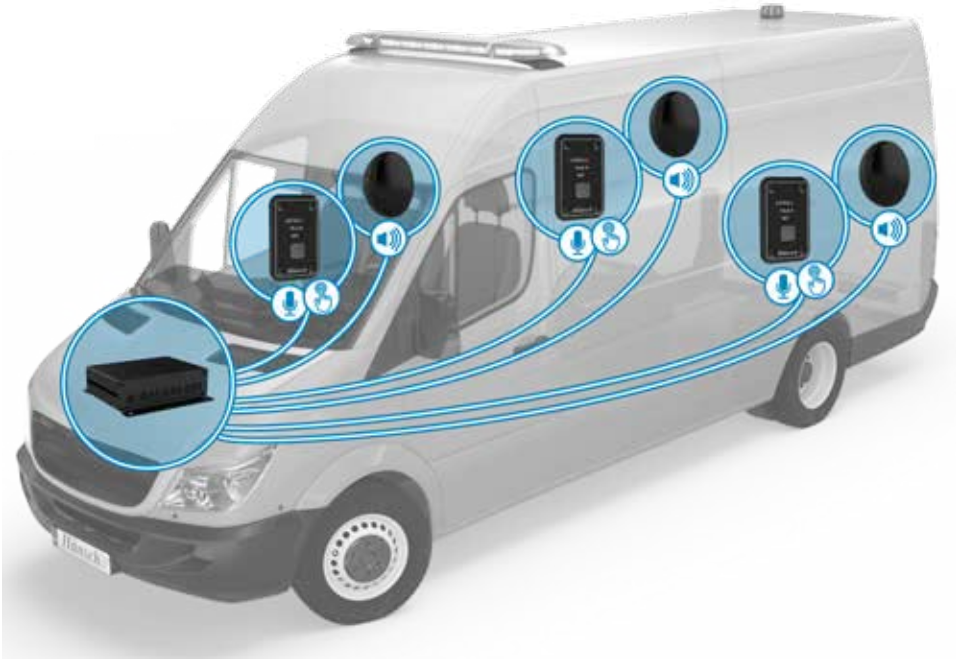
The CarTalker 2.0 is an intercom system with two or even three terminals that can be installed in any vehicle. The system has a wide range of applications, such as in rescue vehicles, special vehicles and crew transport vehicles.

With an optimized speech quality, user friendly and sleek system design, the CarTalker guarantees convenience and maximum safety.
A micro USB interface on the control device also allows system parameterisation.

Application examples CarTalker 2.0



Communication from an enclosed vehicle (inside <> outside)



Communication within a vehicle with two separate sections and three intercom stations

Homologation: (Germany and international)	
EMC according to 72/245/EWG:	E1 10R-06 9930

Further variants on request.

Hänsch®

CarTalker 2.0

You can create a customised system for your vehicle using the following components:

Control device

- Plug & Play via Micro-Fit Connector system
- Volume pre-adjustment on the control device

DKL 604

- For external communication
- Installation in the radiator grille

One-button panel-mounted control unit

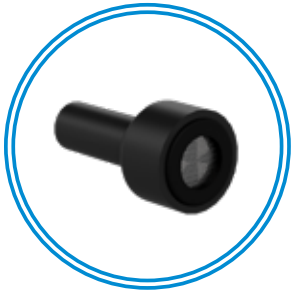
- Integrated microphone
- Integrated status-LEDs
- Fastening points in the cover

Interior loudspeakers

- For communication inside the vehicle
- Various installation options

Hand-held control unit

- Integrated microphone and loudspeaker
- Upgradeable with status LEDs
- Bracket included in the scope of delivery



Mirror microphone

- Optional Y-cable available
- For internal and external installation

Under-threat alarm system

The under-threat alarm system was specially developed for use in armoured vehicles, such as armoured limousines or security vans. The primary functions of the under-threat alarm system are two-way 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 the under-threat alarm system in conjunction with a beacon as a special signalling system.

Components	Mounting location	Functions
GAS 614 or GAS 624 control device	in the vehicle interior	1. two-way intercom communication 2. generation of an attack alarm 3. control of a beacon 4. generation of special signals
DKL 604 (1 or 2 pcs.)	behind the radiator grille	1. playback of speech communication from the vehicle interior 2. broadcast of the attack signal 3. broadcast of the special signal
Mirror microphones (2)	exterior vehicle mirror	recording of the speech communication/sounds surrounding the vehicle
Hands-free and/or rod microphone	e.g. near driver's seat	recording of the speech communication in the vehicle interior
Button or control unit	e.g. near driver's seat	1. activation of attack alarm as panic button 2. activation of speech communication 3. activation of the beacon and special signal, if installed
Interior loudspeakers	use the vehicle's interior loudspeakers or order and install separately - near the driver's seat	playback of the mirror microphone signals
Optional: beacon	on the vehicle roof	required in combination with the special acoustic signal for signalling right of way when driving to a location

PRODUCT FEATURES:

- the amplifier circuit developed for special-purpose vehicles creates a very high sound pressure level, including for the attack alarm – increased safety for vehicle occupants
- two-way intercom communication is possible from the closed, armoured vehicle with very clear voice transmission
- no work on the vehicle body required – easy mounting, compact design of the components, inconspicuous installation
- unique combination of intercommunication, special signal (preprogrammed with German homologation and US tones selectable) and attack alarm

Please contact us for more information or a non-binding consultation.

GAS 614/624 control device

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

- powerful output stages for attack alarm and special signals (many preprogrammed)
- homologation for German special signal according to DIN 14610 with two or even just one DKL 604
- integrated intercom system
- very compact control device

Homologation: (Germany and international)	
Acoustics according to TA 32	W 25071
EMC according to ECE-R 10:	E1 10R-05 8888
Dimensions (W x D x H):	180 x 151 x 47 mm
Weight:	630 g

Mobile warning and communication system

MOWACOM®

The mobile warning and communication system (MOWACOM) has been specially developed for professional users. It is designed in such a way that it can easily be transported, set up and operated by one person. The system is powered by the cigarette lighter, so it can be used without a mains 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. It also includes a digital recording/playback device with interfaces for additional external audio sources (USB stick, MP3 player, mobile phone audio, etc.). The package can be extended by a Comet S beacon.

PRODUCT BENEFITS AT A GLANCE:

Easy handling by one person:

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

Independent of the mains power supply

- system is operated via the vehicle's cigarette lighter

Warning:

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

Communication:

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

10-year guarantee

Hänsch®

Components

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

AREAS OF APPLICATION:

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

Technical data:	Case	Roof unit
Material:	plastic	stainless steel, plastic
Dimensions W x H x D:	600 x 278 x 400 mm	260 x 170 x 260 mm
Colour:	orange	black
Weight:	12 kg (total weight)	7.2 kg
Voltage:	12 V and 12/24 V	-
Waterproof according to IP67	✓	-
Homologation:		
Light according to ECE-R 65:	TA2 E1 00 4426 TB2 E1 00 4425	COMET S (amber) COMET S (blue)
EMC according to ECE-R 10:	(E1) 10R-05 7965 (E1) 10R-06 9243 (E1) 10R-05 6932 (E1) 10R-06 9609	COMET S TFA 744 HBE 300 MOW DE DigiREC

Hänsch
ENGINEERED AND MADE IN GERMANY

Hänsch

INTEGRO – integrated solutions

Hänsch – the custom solutions specialist

Hänsch has made a name for itself in Germany and abroad with its special solutions for visual and acoustic warning systems. Everything from a single source – from the development idea to the design and testing stages to the final homologation. The engineers from the Hänsch development centre are responsible for the entire project and support our customers in all questions and concerns.

We respond to our customers' individual requirements and develop high-quality tailor-made solutions! Many years of experience in the development 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 – our services – your benefits

• from the idea to the 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 according to the customer's ideas – the roof becomes the beacon and the vehicle's appealing design gives it its own identity and makes it highly recognisable.

For these projects, the Hänsch engineers work closely with vehicle manufacturers and special roof manufacturers to develop a concept, create a design and subsequently turn these ideas into reality. The final result is a vehicle that conforms to European directives.

OUR SERVICES:

- support from the idea to the homologation
- consulting during the construction phase*:
  - positioning, mounting, processing
- consulting during the design phase*:
  - the customer's identity must be unique
- handling of the homologation
- delivery of the adapted lighting technology:
  - highest light intensity with certificate

** If required, we will be happy to advise you. In addition, designers and engineers from Hänsch are at your disposal.*

BENEFITS:

Extensive experience with INTEGRO projects worldwide means:

- short implementation times
- expert advice
- certainty with regard to homologation
- flexible mounting options
- fully or partially integrated solutions to suit any budget
- homologation according to ECE-R65 and ECE-R10, 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 HWS

HWS Sputnik mini

PRODUCT FEATURES:

- 4 high-performance LEDs per lamp body
- external electronics for two lamp bodies
- special lens for optimum light distribution

All beacons with an 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 Article 52 Section 11 of the German Road Traffic Licensing Regulations. 2, 4 or 6 lamp bodies, which must flash synchronously, may be mounted on the top at the rear.

HWS Sputnik Compact

Rack mounting (EG)

Surface mounting (AG)

PRODUCT FEATURES:

- 4 high-performance LEDs per lamp body
- special lens for optimised light distribution
- maximum warning effect
- electronics completely integrated in the lamp body
- available in built-in or surface-mounted versions
- easy mounting due to the compact and flat design
- long service life due to high-quality LED technology

HWS Sputnik Hybrid

PRODUCT FEATURES:

- 9 high-performance LEDs per lamp body
- electronics completely integrated in the lamp body
- integrated intersection warner

HWS Sputnik SL

PRODUCT FEATURES:

- 6 high-performance LEDs per lamp body
- electronics completely integrated in the lamp body
- special lens for optimum light distribution
- maximum warning effect > 500 candela

HWS Sputnik Flat

PRODUCT FEATURES:

- 6 high-performance LEDs per lamp body
- electronics completely integrated in the lamp body
- very flat design
- flexible installation options

Hänsch®

Rear warning systems HWS

Technical data:					
Designation:	HWS Sputnik mini-A1	HWS Sputnik Compact-A	HWS Sputnik SL-A / SL-A-V	HWS Sputnik Hybrid	HWS Sputnik Flat
Voltage:	12 V / 24 V multi-voltage	12 V / 24 V multi-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	>2 Hz	>2 Hz
Average power consumption:	12 V: 0.8 A (per lamp body) 24 V: 0.5 A (per lamp body)	12 V: 0.25 A (per lamp body) 24 V: 0.14 A (per lamp body)	12 V: 0.4 A (per lamp body) 24 V: 0.2 A (per lamp body)	12 V: 0.7 A (per lamp body) 24 V: 0.3 A (per lamp body)	12 V: 0.6 A (per lamp body) 24 V: 0.3 A (per lamp body)
Dimensions (W x H x D):	Lamp body: Ø 27 mm / depth 29.5 mm Electronics: 95.5 x 26 x 13 mm (W x H x D)	EG: 73 x 34 x 2.5 mm (W x H x D) AG: 90 x 31 x 10 mm (W x H x D)	125 x 27 x 17 mm (W x H x D)	85 x 12.5 x 36 mm (W x H x D)	113 x 28 x 8.65 mm (W x H x D)
Material:	EL: PA, lamp body: Al/PC	Zn/ PC	Al/ PC	Al, PMMA, PC, TPE	Al, PC
Type of protection:	IP6K7 / IPX9K	IP6K5	IP6K7/ IPX9K	IP6K7/IPX9K	IP6K7/IPX9K
Homologation: (Germany and international)					
Light acc. 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	XA2(E1)005273 (vertical)	XA2(E1)005261 (vertical)
EMC acc. to ECE-R 10:	(E1)10R-05 8617	(E1)10R-04 7591	(E1)10R-05 6845	(E1)10R-06 9528	(E1)10R-06 9557

Rear warning systems RWS

The Hänsch rear warning systems are the reliable add-ons to standard hazard warning systems. A system consists of at least two lamp bodies. It ensures a prompt warning of dangers in all weather and visibility conditions for vehicles following behind. All Hänsch rear warning systems are equipped with powerful LED technology.

RWS
Sputnik Compact

RWS
40 pico LED

RWS
Sputnik pico LED

RWS
Sputnik SL

Rear warning systems RWS

rack mounting (EG)

surface mounting (AG)

RWS Sputnik Compact:

- 4 high-performance LEDs per lamp body
- special lens for optimised light distribution
- maximum warning effect
- electronics completely integrated in the lamp body
- available in built-in or surface-mounted versions
- easy mounting due to the compact and flat design
- long service life due to high-quality LED technology

rack mounting (EG)

surface mounting (AG)

RWS 40 pico LED:

- 8 high-performance LEDs per lamp body
- electronics completely integrated in the lamp body
- special lens for optimum light distribution
- available with or without mounting frame

rack mounting (EG)

surface mounting (AG)

RWS Sputnik pico LED:

- 4 high-performance LEDs per lamp body
- electronics completely integrated in the lamp body
- special lens for optimum light distribution
- available with or without mounting frame

Hänsch®

Rear warning systems RWS

RWS Sputnik SL:

- 6 high-performance LEDs per lamp body
- electronics completely integrated in the lamp body
- special lens for optimum light distribution
- maximum warning effect > 500 candela

Technical data:				
Designation:	RWS Sputnik Compact	RWS 40 pico LED	RWS Sputnik pico LED	RWS Sputnik SL
Voltage:	12 V / 24 V multi-voltage	12 V / 24 V	12 V / 24 V	12 V / 24 V multi-voltage
Flash frequency:	>2 Hz	>2 Hz	>2 Hz	>2 Hz
Average power consumption:	12 V: 0.25 A (per lamp body) 24 V: 0.14 A (per lamp body)	12 V: 2.5 A 24 V: 1.25 A	12 V: 1.5 A 24 V: 0.75 A	12 V: 0.4 A (per lamp body) 24 V: 0.2 A (per lamp body)
Dimensions (W x H x D):	EG: 73 x 34 x 2.5 mm AG: 90 x 31 x 10 mm	169.5 x 85 x 61 mm	80 x 80 x 60 mm	125 x 27 x 17 mm
Material:	Zn/ PC	ASA/ PC	ASA/ PC	Al/ PC
Type of protection:	IP6K5	IP5K4K	IP5K4K	IP6K7/ IPX9K
Homologation: (Germany)				
Light according to TA20:	D: ∿ K 1160	D: ∿ K 538	D: ∿ K 544	D: ∿ K 960 (hor.) / ∿ K 1010 (vert.)
EMC according to ECE-R 10 or 72/245/EEC:	E1 10R-04 7591	E1 10R-06 4465	e1 03 5635	E1 10R-05 6845

- **maximum safety on the runway**
- **tested in accordance with ICAO type C** (more information on page 125)

We supply airport fire brigades with warning systems tested according to ICAO Type C.
With special control units, the digitally controlled versions can be switched to an ECE-R 65-compliant flash pattern, allowing use in regular road traffic.

ICAO beacons

In conjunction with a corresponding control unit, our CiA447 beacons can be switched between ECE-R 65 and ICAO Type C.

COMET LED

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

Fix mounting

PRODUCT FEATURES:

- fixed mounting according to 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 adhesion, even on curved vehicle roofs
- rubber-coated magnets protect paintwork against 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 pages 6 & 7.

Fix mounting

PRODUCT FEATURES:

- fixed mounting according to 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 DBS 4000 warning system 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, allowing operation in regular road traffic.

Customisable

- fitted using a modular system
- flexibly adaptable to individual needs
- flash pattern switching possible

Aerodynamic housing

- low wind resistance and reduced noise level

Variety of mounting options

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

Maximum warning effect

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

Simple control concept

- digital control using the CAN protocol, based on CiA447

Variety of lengths

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

DBS 4000

RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter detection)
- traffic advisor (special approval required)
- convoy function (control required)
- command vehicle light (red or green)
- integrated compressor system
- direction indicator
- working lights
- alley lights: 0° or 20° tilt
- additional flashers
- rear warning system
- power flash
- undercarriage loudspeaker to support public address
- tone sequence system (TFA 614/624/7xx)
- cover glass printing
- full matrix display
- automatic day/night switching
- tube adapter in the top cover
- also available with clear lamp dome
- also available in a blue/amber switchable version (tested in accordance with ICAO type C).
- also available with red radiation colour (without test in accordance with ICAO type C)
- flash pattern switching (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 61 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 divided: 2x 430 mm (24 V)
Depth:	300 mm
Height:	140 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
EMC according to ECE-R 10:	(E1)10R-05 6209
Takedown flash: light acc. to TA 13b:	∿∿ K 1020
Direction indicator: light acc. to ECE-R 6	01 2a (E1) 3800 (rear) / 01 1 (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 powerful LED lighting technology. A maximum warning effect ensures increased awareness at airports. The minimal installation height not only ensures low drag and a reduced noise level, but also makes it possible to pass under structures with low clearance heights. The DBS 5000 warning system is tested in accordance with ICAO type C.

reddot award 2017
winner

Customisable
- mounted using a modular system
- flexibly adaptable to individual needs
- flash pattern switching possible

Aerodynamic housing
- low wind resistance and reduced noise level
- low-profile design

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

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

Simple control concept
- digital control using the CAN protocol, based on CiA447

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

DBS 5000

RANGE OF FUNCTIONS AVAILABLE

- working lights
- alley lights: 0° or 20° tilt
- undercarriage loudspeaker for public address
- additional flashers
- direction indicator*
- traffic advisor (special approval required)
- also available in a blue/amber switchable version (tested in accordance with ICAO type C).
- also available with red radiation colour (without test in accordance with ICAO type C)
- flash pattern switching (between ECE-R 65 and ICAO type C) possible

*with CiA447, an I/O box for reading the analogue signals is required.

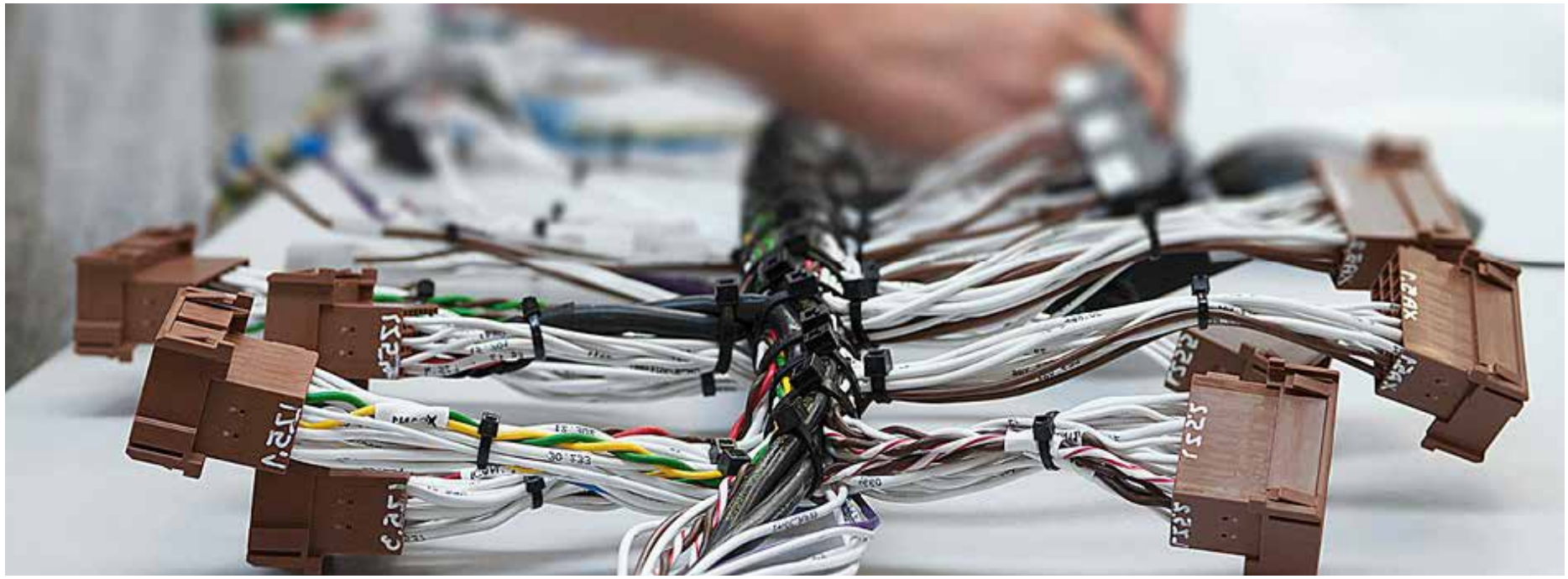
For more information about the options of the DBS 5000, see page 58 onwards.

Technical data:	
Designation:	DBS 5000
Voltage:	12 V / 24 V
Flash frequency:	> 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 according to ECE-R 65:	TB2 (E1) 00 4446 / TB2 (E1) 00 5238
EMC according to ECE-R 10:	(E1)10R-06 7981
Direction indicator: Light acc. to ECE-R 6:	01 1 (E1) 4453 (front) / 01 2a (E1) 4453 (rear)
Rear warning system: Light acc. to ECE-R 65:	XA1 (E1) 00 4471
Power flash: light according to TA13a:	∿∿∿ K 1427

Hänsch®

We connect your special-purpose vehicle systems

Hänsch has also been supplying complete, customised solutions in the field of system wiring since 2019. From development and design to manufacturing and delivery, we support our customers in integrating the specific wiring harnesses 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. We implement projects purposefully and professionally. This is always done in close cooperation with the customer. Our team supports you from the analysis to the integration into the vehicle.



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Hänsch®

Everything from a single source

OUR
SERVICE
FOR YOU

AT YOUR SIDE. WITH CERTAINTY.

Hänsch®

ENGINEERED AND MADE IN GERMANY

QUALITY

TELEPHONE SUPPORT
05962 9360 5000

SUSTAIN-ABILITY
DIN ISO 14001

SPARE PART DISPATCH
within 24 hours.

INFOS
Detailed mounting instructions and wiring diagrams

REPAIRS
In-house workshop

ICAO:

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

The products listed here have been tested for compliance with the type C standard, which 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. The light intensity must never exceed the maximum value of 400 cd. The beacons or lightbar systems are not permitted to have day/night switching.

Hänsch products:

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 Comet LED and Comet S single beacons are available in both analogue and CAN447 versions, tested in accordance with ICAO Type C. The DBS/F 4000 and DBS/W 5000 lightbar systems are only available with CiA447 control. Corresponding ICAO-capable control units are required for CiA447 control. It is possible here to switch between flash patterns in accordance with ICAO type C and ECE-R 65.

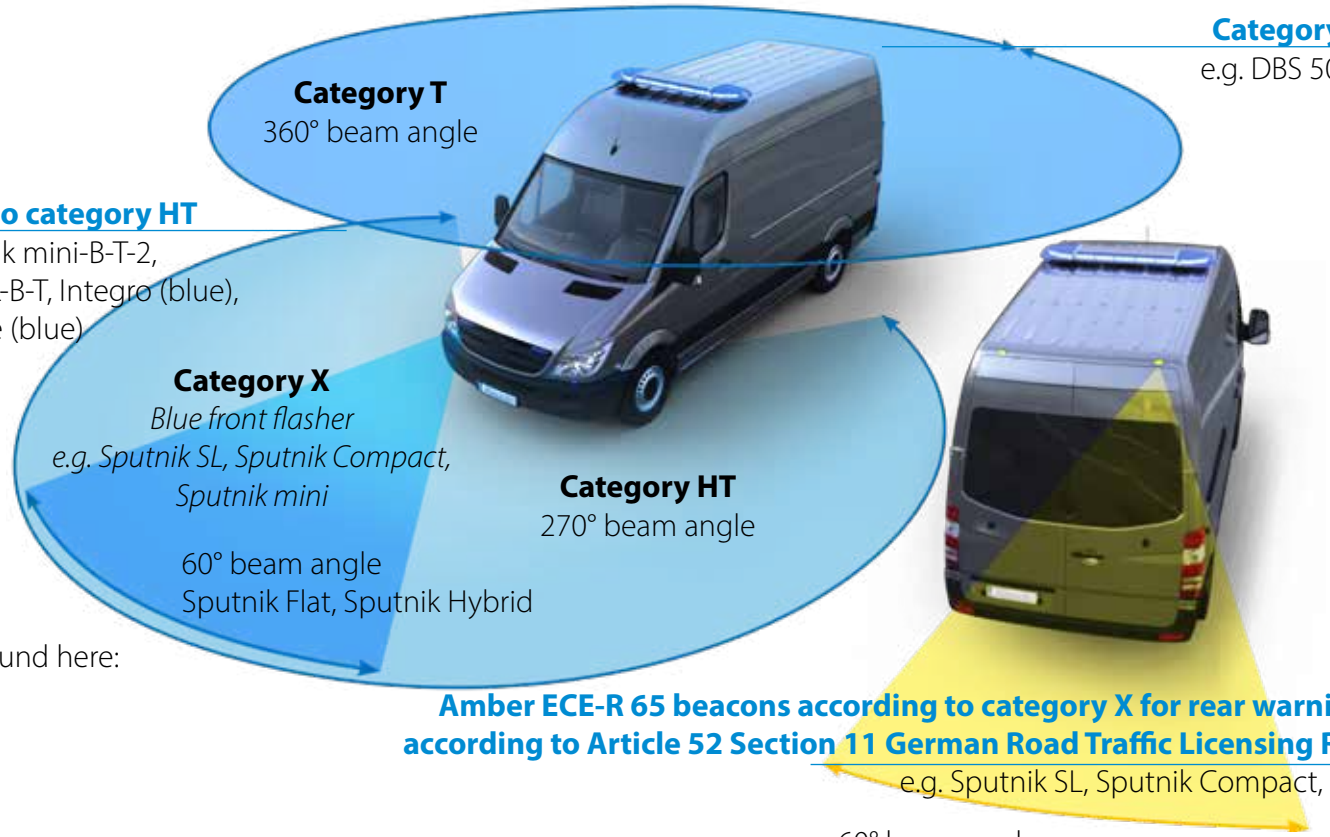
In order not to exceed the maximum permissible light intensity within the ICAO range, the optional additional flashes are not activated when the ICAO flash pattern is activated.

Feel free to contact our sales department!

Glossary

When are HT solutions used?

If the installation of conventional beacons on the vehicle is not possible due to structural conditions, the legally required geometric visibility of 360° can still be achieved by using an HT solution. The HT solution, also referred to as a half-beacon or half lightbar, can be mounted at the front or rear of the vehicle or integrated into the vehicle body. The various solutions, consisting of 2 to 6 HT lamp bodies, allow you maximum flexibility in mounting on the vehicle body. With the Sputnik mini and Sputnik SL HT solutions, installation at the front of the vehicle ensures the earliest possible warning effect, e.g. at intersections or when exiting the depot.



Further information can be found here:

Glossary

Property	Explanation
Function monitoring	Function monitoring allows the operating state of the unit to be checked. The respective operating state can be transmitted by analogue signal line or via the CiA447 bus.
Class II homologation (K2)	The product has a homologation with 2 light intensity levels. The light values can be reduced at night. This is done to prevent glare from excessively high light values at night and/or in case of fog/snow/bad vision.
Day/night switching	Night-time reduction allows products with a class II homologation to reduce the maximum light value either automatically when a defined twilight value is reached, or manually using the control unit (e.g. HBE 300).
Convoy function	The convoy function enables the deactivation of 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 dazzled).
Soft light signal (night)	Special flash pattern with ECE homologation simulating a rotating beacon, but with simultaneous 360° radiation. Recommended especially for work vehicles so that users can work in a more relaxed manner and for longer periods with less aggressive light.
Rear warning system according to Article 52 Section 11 German Road Traffic Licensing Regulations	The system consists of 2, 4 or 6 directional, amber flash lights of the category X (homologation: XA ...). These are mounted on top at the rear of the vehicle and are used to secure vehicles with blue light when stationary or travelling at walking pace.
12 V	This product has a rated voltage of 12 volts.
12 V / 24 V	This product is available with rated voltages of 12 volts and 24 volts.
12 V / 24 V multi-voltage	This product is multi-voltage-capable and can be operated on both 12 volts and 24 volts.
Analogue	The control of components and functions in the special-purpose vehicle via a discreet analogue level Ub (12 V/24 V) or GND. e.g. via a single switch.
FireCAN	The control of FireCAN components and functions in the special-purpose vehicle via the vendor-neutral CAN-bus standard according to DIN14700.
CiA447	The control of CiA447 components and functions in the special-purpose vehicle via the vendor-neutral CANOpen bus standard CiA447. CiA 447 is a specification of "CAN in Automation e.V." and defines the CANopen communication for special-purpose vehicles.

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

Motor vehicle classes:	
M1	Motor vehicle up to 3.5 t and conveyance capacity of up to 9 persons
M2	Motor vehicle up to 5 t and conveyance capacity of more than 9 persons
M3	Motor vehicle over 5 t and conveyance capacity of more than 9 persons
N1	Motor vehicle for goods transport up to 3.5 t
N2	Motor vehicle for goods transport over 3.5 t up to 12 t
N3	Motor vehicle for goods transport over 12 t
N3G	Off-road vehicles

Vehicle classes:	
O1	Trailer up to 0.75 t
O2	Trailer over 0.75 t up to 3.5 t
O3	Trailer over 3.5 t up to 10 t
O4	Trailer over 10 t

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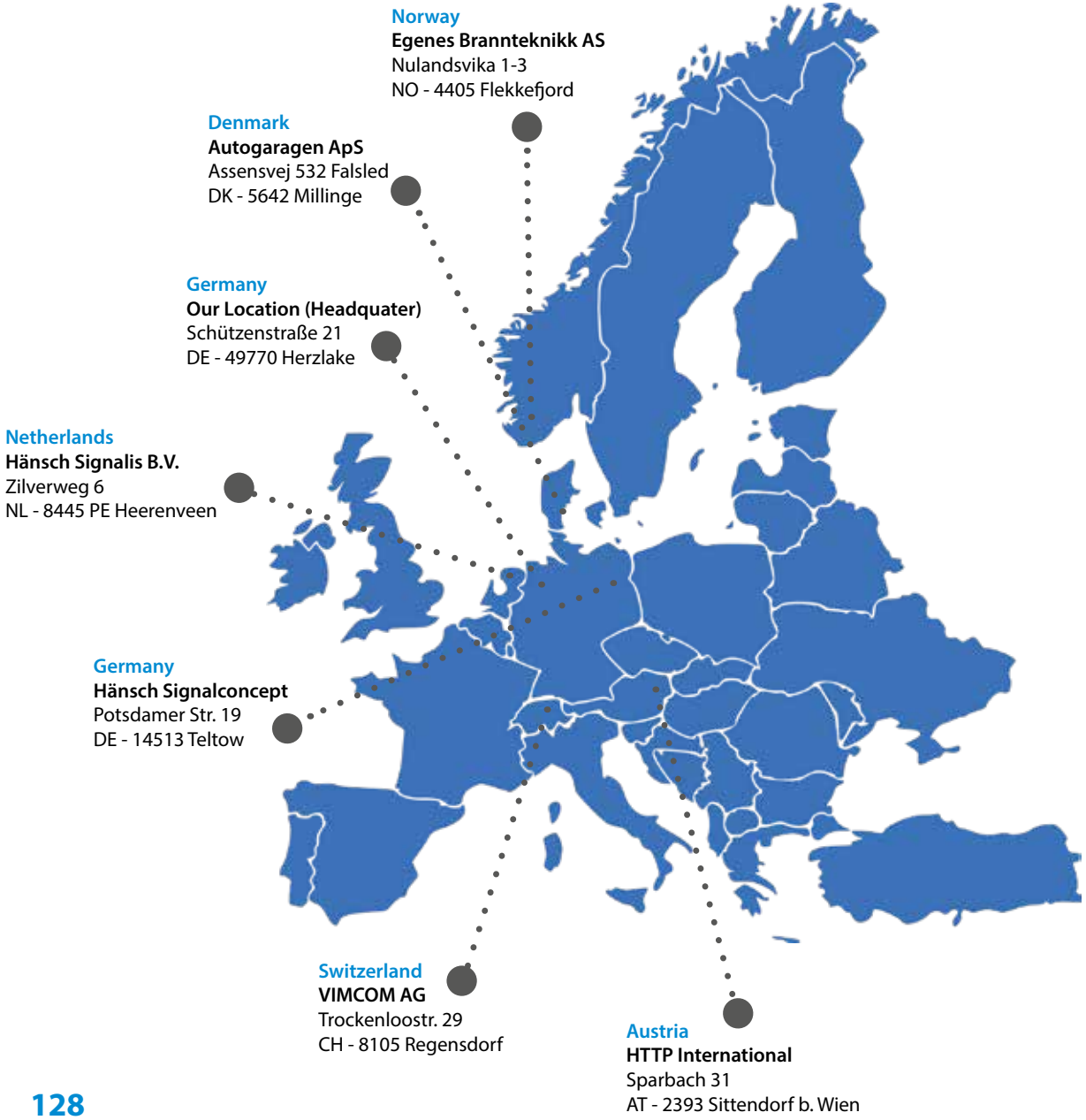
International Sales Team



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CATALOGUE FOR BLUE APPLICATIONS
Subject to change
Issue: March 2025

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