



WERMA
SIGNALTECHNIK

New Products 2008

SIGNAL TOWERS

OPTICAL SIGNAL DEVICES

OPTICAL-AUDIBLE SIGNAL DEVICES



New Products 2008

640/840

EVS LED Element for KombiSIGN 70 and 71



- Attention-grabbing flickering light
- Developed on a neurobiological basis
- Extremely powerful signal effect
- Random sequence of light signals prevents acclimatisation effect
- For signalling extremely hazardous situations and the need for immediate action

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640/840

Foldaway Base for KombiSIGN 50, 70 and 71



- The signal tower can be folded away while still connected
- Minimises packaging and optimises machine transportation
- Simple mounting and cable entry - for up to Ø 14 mm
- Vertical alignment of signal towers even on sloping surfaces
- Positioning in 7.5° steps

Page 6

890

LED Beacon / LED Traffic Light in new housing



- LED Beacon for traffic light combinations with new housing material
- New fixing bow for simple mounting
- Modern appearance thanks to appealing grey tone

Page 8

890

Permanent / Traffic Light Beacon in new housing



- Permanent Beacon for traffic light combinations with new housing material
- New fixing bow for simple mounting
- Modern appearance thanks to appealing grey tone

Page 9

890

New Fixing Bow for Beacons 890



- Beacon/Traffic Light can be completely pre-mounted on the fixing bow and connected before attachment
- Easy mounting in just a few steps
- Variable attachment options
- High protection rating IP 65

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894

LED Traffic Light



- High visibility LED Traffic Light in an innovative design
- Clear signalling even in direct sunlight thanks to clear lenses
- Simple mounting thanks to integrated mounting bracket
- Very good sideward visibility

Page 12

894

LED Beacon / LED Traffic Light



- High visibility LED Beacon / Traffic Light in an innovative design
- Colour intensive light effect thanks to LEDs in the same colour as the lenses
- Simple mounting thanks to integrated mounting bracket
- Very good sideward visibility

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494

LED Traffic Light / Siren Combination



- High visibility LED Traffic Light with integrated siren
- Unmistakable signalling even in direct sunlight thanks to clear lenses
- Sound output up to 80 dB
- Simple mounting thanks to integrated mounting bracket
- The optical signal also offers very good sideward visibility



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494

LED Beacon / Siren Combination



- High visibility LED Beacon with integrated siren
- Colour intensive light effect thanks to LEDs in the same colour as the lenses
- Sound output up to 80 dB
- Simple mounting thanks to integrated mounting bracket
- The optical signal also offers very good sideward visibility



Page 15

EVS – Enhanced Visibility System

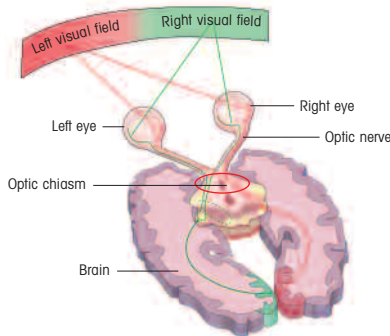


A groundbreaking innovation in LED technology opens up a completely new dimension in optical signalling. Enhanced Visibility System, or the electronic improvement of visibility, for EVS short, is the name WERMA has given to this latest development which promises to bring about a revolution in signal technology.

EVS – ATTENTION-GRABBING LIGHT EFFECT ON NEUROBIOLOGICAL BASIS

Visual Pathways

The way in which the brain processes visual stimuli formed the basis for the development of the new EVS technology



The flickering of neon lamps and comparable lighting effects are highly effective at attracting our attention. The neurobiological basis of this phenomenon is explained by a university scientist as follows: Light signals are processed in the human brain, not directly in the eye. In order to be consciously registered there, incoming stimuli first have to pass through a form of filter. This filter has a "protective function". During sleep it reduces disturbing stimuli to a minimum and assists in "overlooking" regular or continuous signals.

Irregular light impulses can circumvent the brain's filter function. Random light signals fail to generate an acclimatisation effect and the brain is unable to escape the stimulus, even when the flickering continues for an extended period

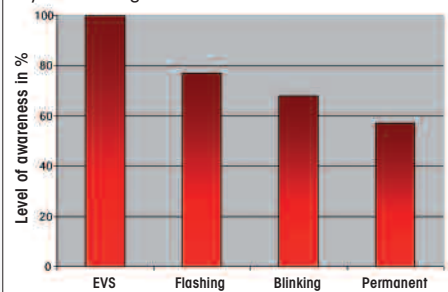
EVS – FLICKERING LIGHT WITHOUT ACCLIMATISATION EFFECT

On the basis of this understanding, WERMA's R+D department set out to find a flickering light with a high degree of effectivity in attracting attention. In a multi-stage laboratory experiment 20 test candidates were asked to judge a series of different light signals and to determine the most eye-catching light. The result of the study was a stochastic flickering light with optimal attention-grabbing characteristics: EVS – Enhanced Visibility System! The light effect of this system is completely new and distinguishes it from all previous systems.

As a result of the extremely powerful signal effect, the EVS light is especially suited to signalling acute or highly important conditions. The EVS element can also be deployed in hazardous situations or in areas where immediate action is required.

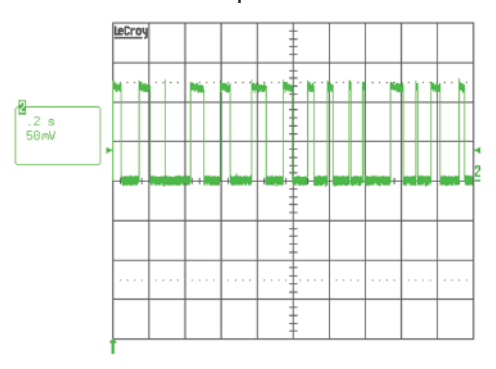
Laboratory Test Results

Level of awareness generated by different light effects



EVS – UNIQUE LIGHT EFFECT VIA LED TECHNOLOGY

Typical 2 second section of an EVS-LED element's illumination sequence



For the EVS system WERMA employs light emitting diodes. A micro-processor generates random light signals. This gives the light a very "agitated" character which proves highly effective in drawing the attention of those in its vicinity – even when seen out of the corner of the eye.

Up to now LED signal devices have confined themselves to imitating the light effects of light bulbs or Xenon flashes, EVS however utilises the strengths of light emitting diodes. LEDs are capable of generating the required high flickering frequency with ease, frequencies which Xenon flashes for example are incapable of generating.

There are a series of additional, classical advantage to LEDs – their resistance to vibration and shocks, their long life duration as well as their low energy consumption.



- Attention-grabbing flickering light
- Developed on a neurobiological basis
- Extremely powerful signal effect
- Random sequence of light signals prevents acclimatisation effect
- For signalling extremely hazardous situations and the need for immediate action

i TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 65 mm
Dome:	PC, transparent
Number of modules possible:	5 / 10 elements with 2-sided bracket
Starting consumption:	< 500 mA at 24 V
Current consumption:	red / yellow: 200 mA green / blue / clear: 150 mA

Life duration up to 50,000 hrs



🛒 ORDER SPECIFICATIONS:

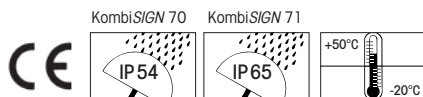
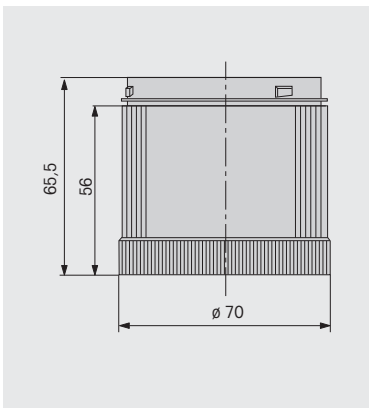
KombiSIGN 70	24 V =
red	843 140 55
green	843 240 55
yellow	843 340 55
clear	843 440 55
blue	843 540 55
KombiSIGN 71	24 V =
red	644 140 55
green	644 240 55
yellow	644 340 55
clear	644 440 55
blue	644 540 55

Available from 3rd Quarter 2008.

Further optical and audible elements, as well as terminal elements and a comprehensive range of accessories for the KombiSIGN 70 and 71 signal towers can be found in the WERMA Catalogue and under www.werma.com.

* **EVS** = Enhanced Visibility System

Integrated into the KombiSIGN Signal Towers, the new EVS LED Element generates a highly attention-grabbing signal



Foldaway Base for KombiSIGN 50, 70 and 71

INNOVATIVE MOUNTING OPTION FOR SIGNAL TOWERS



KombiSIGN Signal Towers from WERMA are deployed with high-quality industrial equipment, fulfilling important monitoring and control functions, especially within the fields of mechanical and plant engineering.

The comprehensive range of accessories has now been extended with the addition of the new Foldaway Base. This provides customers with flexible and innovative mounting options as well as unique solutions for the Signal Tower series KombiSIGN 50, 70 and 71.



THE ADVANTAGES AT A GLANCE



- ✓ The signal tower can be folded away while still connected
- ✓ Minimises packaging and optimises machine transportation
- ✓ Vertical alignment of signal towers even on sloping attachment surfaces
- ✓ Uncomplicated cable entry, also with solid cable up to a maximum diameter of 14 mm
- ✓ Maximum user benefit
- ✓ Simple mounting
- ✓ High protection rating IP 65



QUICK AND SIMPLY MOUNTING

1



Place the lower part of the Foldaway Base in the desired position

2



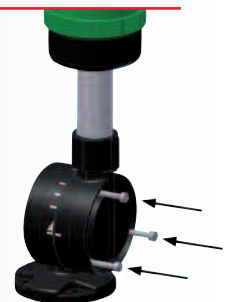
Attach the upper part directly onto the signal tower tube. Insert the connection cable

3



Place the upper and lower parts together at the desired angle

4



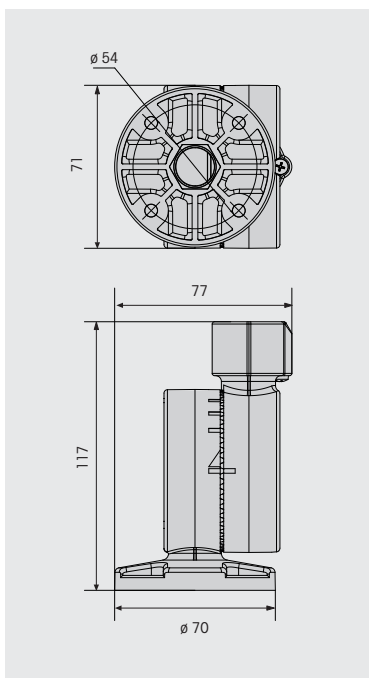
Secure the two parts with the screws supplied

640/840 Foldaway Base for KombiSIGN 50, 70 and 71

- The signal tower can be folded away while still connected
- Minimises packaging and optimises machine transportation
- Simple mounting and cable entry – for up to \varnothing 14 mm
- Vertical alignment of signal towers even on sloping surfaces
- Positioning in 7.5° steps



When transporting the machine, the signal tower can be folded away in a few simple steps



i TECHNICAL SPECIFICATIONS:

Dimensions (\varnothing x Height):	71.5 mm x 110 mm
Material:	PA-GF
Cable Diameter:	max. 14 mm
Assembly:	incl. rubber seals
Fixing:	vertical, horizontal Positioning in 7.5° steps
Suitable for:	Tube, \varnothing 25 mm, all anodized aluminium, not included in assembly (accessory)

🛒 ORDER SPECIFICATIONS:

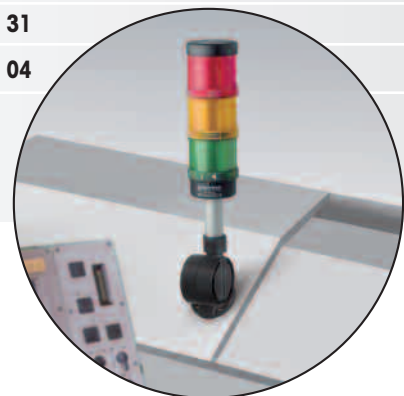
Foldaway Base for KombiSIGN 50, 70 and 71 **960 000 30**

Available from 2nd Quarter 2008.

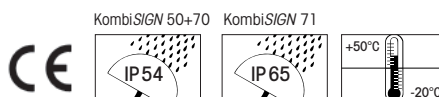
🏠 ACCESSORIES:

Tube \varnothing 25 mm, all anodized aluminium	
100 mm long	975 845 10
250 mm long	975 840 25
400 mm long	975 840 40
600 mm long	975 840 60
800 mm long	975 840 80
1000 mm long	975 840 03
Tube adapter for Foldaway Base	960 000 31
Cable gland M16 x 1.5 mm	960 000 04

Further accessories for the KombiSIGN 50, 70 and 71 signal towers can be found in the WERMA Catalogue and under www.werma.com.



Vertical alignment of Signal Towers even on sloping surfaces



890 LED-Beacon / LED-Traffic Light in new housing



LED Beacon



NEW Traffic Light Combination with new fixing bow (accessory)

- LED Beacon for traffic light combinations with new housing material
- New fixing bow for simple mounting
- Modern appearance thanks to appealing grey tone

i TECHNICAL SPECIFICATIONS:

Life duration up to 50,000 hrs

Dimensions (Ø x Height):	150 mm x 147 mm
Housing:	PC/ABS-Blend, grey
Dome:	PC, transparent
Fixing:	Base mounting, fixing bow (accessory)
Connection:	Screwable connection max. 1.5 mm ²
Installation position:	as required
Cable entry:	From top or bottom with cable gland M 20 x 1.5 mm or from the back with rubber grommet Ø 6 – 12 mm, included in assembly.

🛒 ORDER SPECIFICATIONS:

	12-24 V =	115 V ~	230 V ~
Current consumption	< 200 mA	< 35 mA	< 35 mA
red	890 120 55	890 120 67	890 120 68
green	890 220 55	890 220 67	890 220 68
yellow	890 320 55	890 320 67	890 220 68

Available from 2nd Quarter 2008.

🏠 ACCESSORIES:

Fixing bow for one beacon	975 890 33
Fixing bow for two beacon	975 890 34
Fixing bow for three beacon	975 890 35

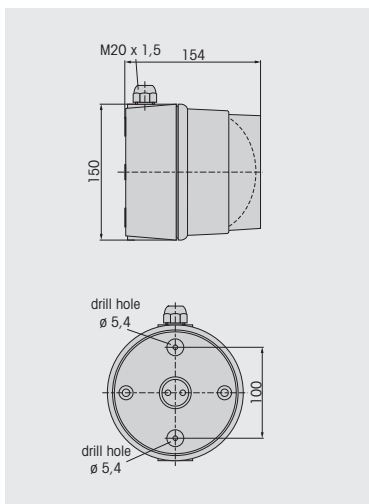
Mounting material and connecting grommet included in assembly.

Further information can be found on page 10.

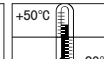
Further accessories can be found in the WERMA Catalogue and under www.werma.com.



Clear lenses ensure signalling effect even in direct sunlight



In preparation



890 Permanent /Traffic Light Beacon in new housing



Permanent Beacon



NEW Traffic Light Combination with new mounting bracket (accessory)

- Permanent Beacon for traffic light combinations with new housing material
- Modern appearance thanks to appealing grey tone
- New fixing bow for simple mounting

i TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	150 mm x 154 mm
Housing:	PC/ABS-Blend
Dome:	PC, transparent
Socket:	E27 max. 25 W at 890 X00 00 2 sockets each with max. 15 W at 890 X10 00 with adhesive stickers E27 max. 15 W
Fixing:	Base mounting, fixing bow (accessory)
Connection:	Screw-free clamp mechanism max. 1.5 mm ²
Cable entry:	From top or bottom with cable gland M 20 x 1.5 mm or from the back with rubber grommet Ø 6 – 12 mm, included in assembly.

🛒 ORDER SPECIFICATIONS:

PERMANENT LIGHT

Voltage	12 – 240 V≈
red	890 100 00
green	890 200 00
yellow	890 300 00
clear	890 400 00
blue	890 500 00

PERMANENT LIGHT WITH 2 SOCKETS (Incl. Reflector)

Voltage	12 – 240 V≈
red	890 110 00
green	890 210 00
yellow	890 310 00

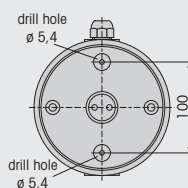
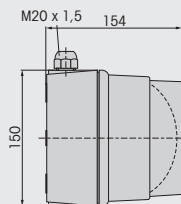
Available from 2nd Quarter 2008.

🏠 ACCESSORIES:

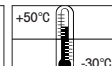
Fixing bow for one beacon	975 890 33
Fixing bow for two beacon	975 890 34
Fixing bow for three beacon	975 890 35

Mounting material and connecting grommet included in assembly.
Further information can be found on page 10.

Further accessories can be found in the WERMA Catalogue and under www.werma.com.



In preparation





Fixing Bow for (LED) Beacons 890



- Beacon/Traffic Light can be completely pre-mounted on the fixing bow and connected before attachment
- Easy mounting in just a few steps
- Variable attachment options
- High protection rating IP 65

i TECHNICAL SPECIFICATIONS:

Material Fixing Bow:	PC/ABS-Blend
Material Connecting Grommet:	PA 6.6
Assembly:	Fixing Bow with mounting material and connecting grommet Beacon not included in assembly.
Suitable for:	LED Beacon/LED Traffic Light 890 (see page 8) Permanent/Traffic Light Beacon 890 (see page 9)

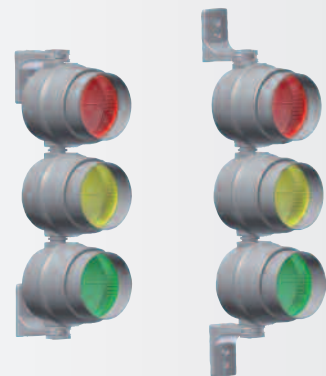
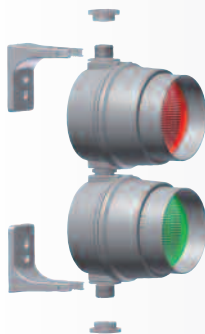
No seal necessary.

🛒 ORDER SPECIFICATIONS:

Fixing bow for one beacon	975 890 33
Fixing bow for two beacon	975 890 34
Fixing bow for three beacon	975 890 35

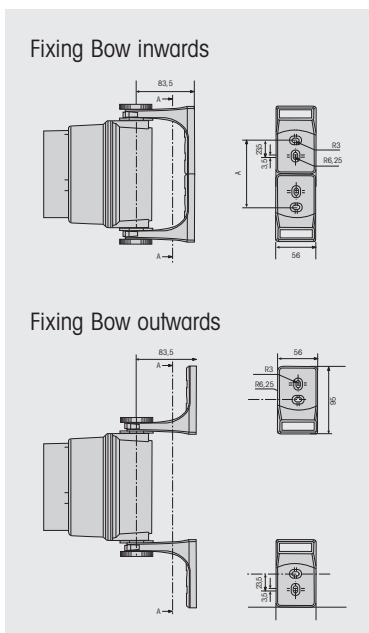
Available from 2nd Quarter 2008.

✓ THE ADVANTAGES AT A GLANCE:



Simple mounting: mount the fixing bow, attach the pre-assembled traffic light and tighten the nuts from both sides

The fixing bow can be mounted pointing inwards or outwards



LED Beacon/LED Traffic Light in innovative design

WERMA has extended its successful programme of optical signal devices with the addition of the new LED Beacon and LED Traffic Light in an innovative design. The new beacons are available either as single LED Beacons in red, green or yellow or as LED Traffic Light Combinations in the colours red/green or red/yellow/green.



INNOVATIVE DESIGN FOR NEW FIELDS OF APPLICATION



The new LED Beacons combine a completely new traffic light form with a high degree of functionality and cost-effectiveness. They can be deployed for a range of tasks within industry, automation and building services engineering. Thanks to the modern design and the attractive, innovative plastic housing, the signal beacons can also be deployed in fields where appearance plays an important role.

They are especially suited for applications where the classical traffic light form is unsuitable, for example in the fields of access control, warehousing technology or in the leisure sector.

CHOICE OF BOTH CLEAR AND COLOURED LENSES

The traffic light version of the new LED Beacon is available with both coloured or transparent lenses. In the version with coloured lenses, the LEDs produce light in the same colour as the lens - this generates a more intensely coloured optical signal.

On the other hand, the colourless lenses guarantee an unmistakable signal effect even in direct sunlight.

OPTICAL SIGNAL RADIATES IN THE REQUIRED DIRECTION

Thanks to the innovative fixing bow, the direction of the optical signal can be individually adjusted. After the bracket has been mounted, the customer has the opportunity to set the direction of the traffic light in accordance with their needs. The LED Beacon and Traffic Light can be turned through 360 degrees, thus guaranteeing optimum signal visibility from all viewing angles.

An additional fixing bow (accessory) can be attached beneath the beacon for a stylish, individual look. In addition, this second fixing bow provides maximum stability



A LOUD ADDITION



With many applications it is necessary to supplement the optical signal with an additional audible signal. The new LED Beacon and LED Traffic Light from WERMA provide the optimal solution: The high visibility permanent LED light in combination with a loud integrated siren. This combination generates a sound output in excess of 80 dB and a tone frequency of 50 Hz.



LED Traffic Light (2 tier)



LED Traffic Light (3 tier)

- High visibility LED Traffic Light in an innovative design
- Clear signalling even in direct sunlight thanks to clear lenses
- Simple mounting thanks to integrated mounting bracket
- Very good sideward visibility

i TECHNICAL SPECIFICATIONS:

Dimensions (D x W x H):	1 tier:	136 mm x 85 mm x 226 mm
	2 tier:	136 mm x 85 mm x 311 mm
	3 tier:	136 mm x 85 mm x 396 mm
Housing:	PC/ABS, grey	
Lens:	PC, transparent	
Fixing:	wall mounting	
Installation position:	vertical	
Connection:	Screwable connection with wire protection max. 1.5 mm ²	
Cable entry:	Cable diameter max. 13 mm	
Duty cycle:	100 % ED	

Life duration up to 50,000 hrs

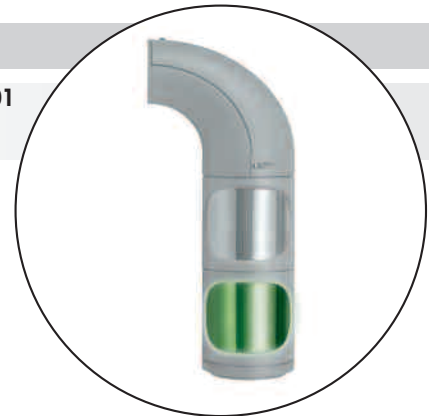
🛒 ORDER SPECIFICATIONS:

Voltage	24 V=	115 bis 230 V~
Current Consumption	80 mA (red/yellow)	35 mA
	160 mA (green)	
red / green	894 160 55	894 160 68
red / yellow / green	894 180 55	894 180 68

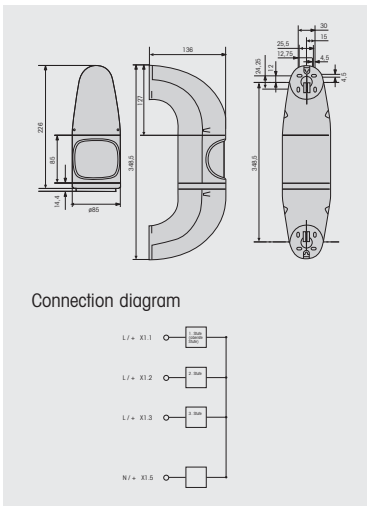
Available from 3rd Quarter 2008.

🏠 ACCESSORIES:

Additional Fixing Bow underneath **975 894 01**
(see page 13)



Clear lenses ensure signalling effect even in direct sunlight



In preparation

CE C UL US

2 tier, with fixing bow **380 g**

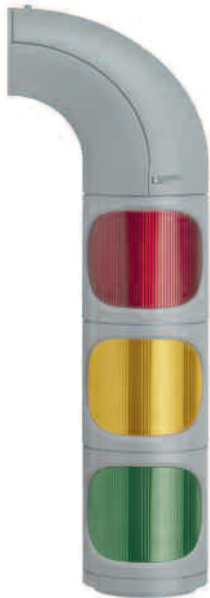
3 tier, with fixing bow **410 g**

IP 65

+50°C / -30°C



LED Beacon (1 tier)



- High visibility LED Beacon / Traffic Light in an innovative design
- Colour intensive light effect thanks to LEDs in the same colour as the lenses
- Simple mounting thanks to integrated mounting bracket
- Very good sideward visibility

i TECHNICAL SPECIFICATIONS:

Dimensions (D x W x H):	1 tier:	136 mm x 85 mm x 226 mm
	2 tier:	136 mm x 85 mm x 311 mm
	3 tier:	136 mm x 85 mm x 396 mm
Housing:	PC/ABS, grey	
Lens:	PC, transparent	
Fixing:	wall mounting	
Installation position:	vertical	
Connection:	Screwable connection with wire protection max. 1.5 mm ²	
Cable entry:	Cable diameter max. 13 mm	
Duty cycle:	100 % ED	

Life duration up to 50,000 hrs

🛒 ORDER SPECIFICATIONS:

Voltage	24 V=	115 bis 230 V~
Current Consumption	80 mA (red/yellow) 160 mA (green)	35 mA
red	894 010 55	894 010 68
green	894 020 55	894 020 68
yellow	894 030 55	894 030 68
red / green	894 060 55	894 060 68
red / yellow / green	894 080 55	894 080 68

Available from 3rd Quarter 2008.

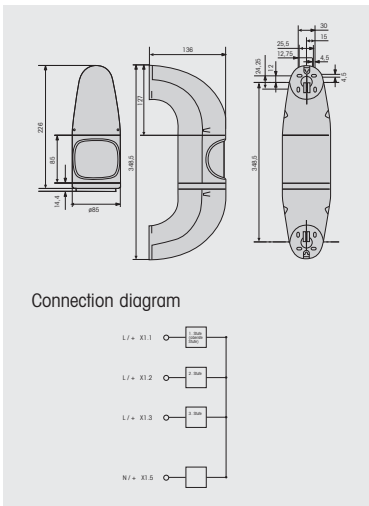
🏠 ACCESSORIES:

Additional Fixing Bow underneath **975 894 01**



Innovative design option with the attachment of a second fixing bow (accessory)

The direction of the optical signal can be individually adjusted



In preparation

CE C UL US

1 tier, with fixing bow **350 g**

2 tier, with fixing bow **380 g**

3 tier, with fixing bow **410 g**

IP65

+50°C / -30°C



LED Traffic Light with integrated siren (2 tier)



Integrated siren with high sound output up to 80 dB

- High visibility LED Traffic Light with integrated siren
- Unmistakable signalling even in direct sunlight thanks to clear lenses
- Sound output up to 80 dB
- Simple mounting thanks to integrated mounting bracket
- The optical signal also offers very good sideways visibility

i TECHNICAL SPECIFICATIONS:

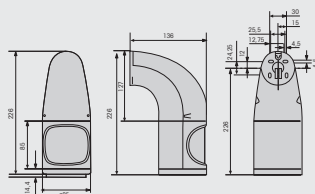
Dimensions (D x W x H):	1 tier: 136 mm x 85 mm x 226 mm 2 tier: 136 mm x 85 mm x 311 mm 3 tier: 136 mm x 85 mm x 396 mm
Housing:	PC/ABS, grey
Lens:	PC, transparent
Fixing:	Wall mounting
Installation position:	Vertical
Connection:	Screwable connection with wire protection max. 1.5 mm ²
Cable entry:	Cable diameter max. 13 mm
Duty cycle:	100 % ED
Tone type:	Continuous tone
Tone frequency:	50 Hz
Sound output:	> 80 dB

Life duration up to 50,000 hrs

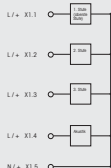
ORDER SPECIFICATIONS:

Voltage	24 V \equiv	115 bis 230 V \sim
Current Consumption LED	80 mA (red/yellow) 160 mA (green)	35 mA
Siren	35 mA	35 mA
red / green	494 160 55	494 160 68
red / yellow / green	494 180 55	494 180 68

Available from 3rd Quarter 2008



Connection diagram



Clear lenses ensure signalling effect even in direct sunlight

In preparation

CE C UL US

2 tier, with fixing bow: 380 g

3 tier, with fixing bow: 410 g

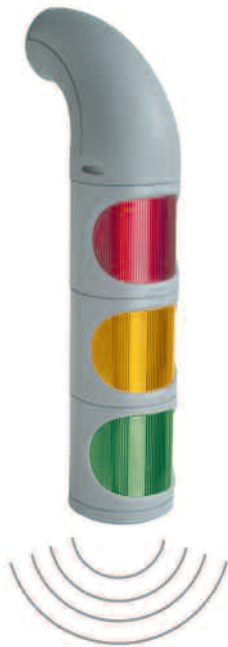
IP 65

+50°C to -30°C

> 80 dB



LED Beacon with integrated siren (1 tier)



Integrated siren with high sound output up to 80 dB

- High visibility LED Beacon with integrated siren
- Colour intensive light effect thanks to LEDs in the same colour as the lenses
- Sound output up to 80 dB
- Simple mounting thanks to integrated mounting bracket
- The optical signal also offers very good sideways visibility

i TECHNICAL SPECIFICATIONS:

Dimensions (D x W x H):	1 tier: 136 mm x 85 mm x 226 mm
	2 tier: 136 mm x 85 mm x 311 mm
	3 tier: 136 mm x 85 mm x 396 mm
Housing:	PC/ABS, grey
Lens:	PC, transparent
Fixing:	Wall mounting
Installation position:	Vertical
Connection:	Screwable connection with wire protection max. 1.5 mm ²
Cable entry:	Cable diameter max. 13 mm
Duty cycle:	100 % ED
Tone type:	Continuous tone
Tone frequency:	50 Hz
Sound output:	> 80 dB

Life duration up to 50,000 hrs

ORDER SPECIFICATIONS:

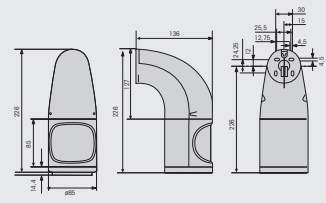
Voltage	24 V =	115 bis 230 V ~
Current Consumption LED	80 mA (red/yellow)	35 mA
	160 mA (green)	
	Siren	35 mA
red	494 010 55	494 010 68
green	494 020 55	494 020 68
yellow	494 030 55	494 030 68
red / green	494 060 55	494 060 68
red / yellow / green	494 080 55	494 080 68



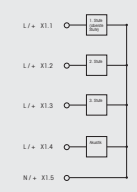
Available from 3rd Quarter 2008



The direction of the optical signal can be individually adjusted



Connection diagram



In preparation

CE	C	UL	US
1 tier, with fixing bow	2 tier, with fixing bow	3 tier, with fixing bow	IP 65
350 g	380 g	410 g	+50°C
			-30°C
			> 80 dB

