



KombiSIGN Signal Towers –

Signals to combine – At the twist of a hand



- ✓ Signal elements in every common voltage
- ✓ Modular system allows combination as required
- ✓ High protection rating IP 54 or IP 65
- ✓ Wide range of audible elements
- ✓ There is an increase in the use of LEDs in optical elements
- ✓ New LED technology ensures even better visibility
- ✓ The LEDs are the same colour as the dome, which increases the light and colour intensity



KombiSIGN 71

Protection Rating IP 65

Modular signal tower system with 70 mm diameter for use in extreme conditions.

Not compatible with KombiSIGN 70

Terminal Element



Either: improved screwable connection



Or: terminal element with CAGE CLAMP® technology



Cylindrical terminal element

See page 40.



KombiSIGN 70

Protection Rating IP 54

Modular signal tower system with 70 mm diameter for use in normal conditions.

Not compatible with KombiSIGN 71

Terminal Element



Screwable connection



Conical terminal element

See page 56.



KombiSIGN 50

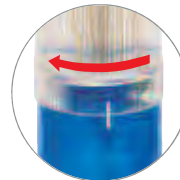
Protection Rating IP 54

Modular signal tower system with 50 mm diameter for use on smaller machines.

Terminal Element



Screwable connection



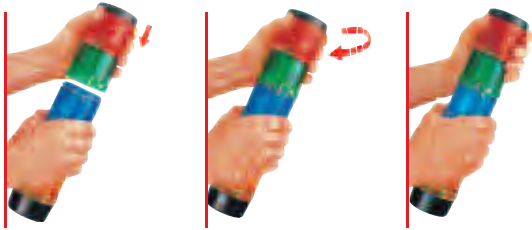
Practical bayonet fixing system
Tool-free bulb-change.

See page 70.



a WERMA key competency

Simple operation thanks to bayonet mechanism



WERMA was the first signal beacon manufacturer to offer a bayonet mechanism allowing elements to be mechanically and electrically connected within seconds.

- ✓ Simple mounting and removal of the elements
- ✓ New combinations at the twist of a hand
- ✓ Tool-free bulb change

A fitting solution for every mounting requirement

The comprehensive range of accessories for KombiSIGN signal towers offers solutions for the most diverse mounting needs and exceeds the industry standards in this respect.

Besides the wide choice of brackets, bases and tubes WERMA also offers unique special solutions, for example the new Foldaway Base, the Tube with Clamp or the Indication Board.

You will find an overview of the entire range of accessories for KombiSIGN Signal Towers on pages 76 and 77.



NEW KombiSIGN Signal Tower with Foldaway Base

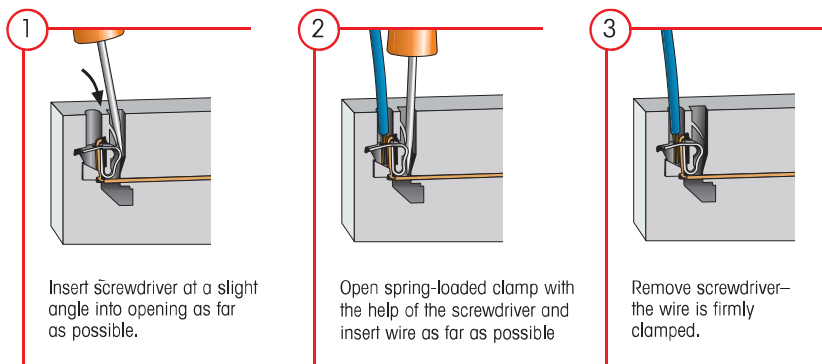


Indication board for the addition of instructions



Safe and efficient handling thanks to CAGE CLAMP® technology

Terminal elements with CAGE CLAMP® technology enable leads to be quickly and easily wired, guaranteeing a secure and reliable contact.



CAGE CLAMP® is a registered trademark of WAGO Kontakttechnik GmbH.



KombiSIGN-Highlights



NEW

EVS LED Element for KombiSIGN 70 + 71 P. 63 + 47



WERMA has developed a stochastic, random flickering light on a neurobiological basis: EVS, Enhanced Visibility System. This generates an optimal attention level never reached by previous signal devices.

For the EVS system WERMA employs light emitting diodes. A microprocessor 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.

- ✓ 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



NEW

Foldaway Base for KombiSIGN 50, 70 + 71 P. 73, 64 + 48



The Foldaway Base from WERMA enables signal towers to be folded down completely, even when connected. This is especially important when machines with pre-mounted signal towers need to be dispatched. Before packaging, the signal tower can be folded down through 90 degrees in a few simple steps. The tower can then simply be restored to the upright position once the machine has reached its destination – all without having to remove the electrical connections.

Using the new Foldaway Base it is now possible to align signal towers vertically, even on sloping surfaces. Simply fix the tube element onto the Foldaway Base at the required angle. The two parts can be adjusted in 7.5 degree steps.

- ✓ Simple mounting and cable entry - for up to \varnothing 14 mm
- ✓ Unique locking mechanism provides maximum stability, even with strong shocks and vibrations.
- ✓ Vertical alignment of signal towers even on sloping surfaces
- ✓ Positioning in 7.5° steps - Markings enable the signal tower to be simply and precisely positioned at an angle of 30, 45, 60 or 90 degrees



KombiSIGN-Highlights



Vocal Element for KombiSIGN 70 + 71 P. 65 + 49

mp3-compatible



The unique vocal element can replay sounds, songs and recorded spoken messages. The module is simply integrated into the existing KombiSIGN 70 or 71 series signal tower, and can be supplemented with up to three further light elements.

Using the supplied USB connecting cable, the vocal element can be easily linked up to a PC or laptop. It is automatically recognised as new hardware and appears as an external memory in Windows Explorer.

It is now possible to effortlessly move existing audio files to the vocal element using the drag & drop method.

- ✓ Plays customer specific audio files in mp3 format (tones, songs and spoken texts)
- ✓ Easy programming via USB interface
- ✓ Excellent sound quality
- ✓ Up to 60 minutes replay capacity
- ✓ Positive and negative logic possible

This Signal Tower speaks to you!



GSM Transmitter Element for KombiSIGN 70 + 71 P. 66 + 50



Machine downtime and the resulting production losses cost time, money and nerves. The GSM Transmitter Element enables you to reduce machine downtime to a minimum and easily increase the productivity of your plant.

If your machinery develops a malfunction, the transmitter element immediately sends a text message to your phone. You are informed about the actual status of your plant at any time and wherever you happen to be.

- ✓ GSM Transmitter Element can be simply integrated into an existing signal tower
- ✓ Activation without the need for programming
- ✓ Malfunction signalled by signal tower is transmitted via SMS or Call to a mobile phone
- ✓ No additional power supply needed
- ✓ Also suitable for US frequencies (Quadband)





KombiSIGN-Highlights

LED Flashing Light Element for KombiSIGN 70 + 71 P. 59 + 43



The LED flash stands out from the traditional xenon flash due to its light intensity and an extremely long life duration of up to 50,000 hrs. It is especially suited for battery and power pack applications due to its significantly lower current consumption.

- ✓ An optimal light output using LEDs
- ✓ Extremely long life duration up to 50,000 hrs
- ✓ Low current consumption
- ✓ Shock-proof and vibration resistant



Life duration
up to 50,000 hrs

AS-Interface Element for KombiSIGN 70 + 71 P. 67 + 53

The AS-Interface Element is available with either Standard Slave or the new A/B technology. The Standard Slave models are, as specified by AS Interface specification 2.11, able to address up to 31 modules and trigger four tiers. The new A/B technology makes it possible to address up to 62 modules and trigger three tiers.



- ✓ Light diodes indicate current status
- ✓ 31 or 62 addresses
- ✓ Available with standard or new A/B technology
- ✓ With addressing socket
- ✓ Voltage supply switchable from internal bus supply to additional external voltage supply

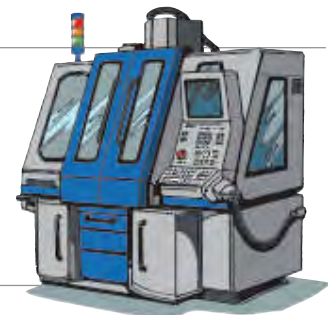


KombiSIGN 70 + 71 with customer specific coloured coatings P. 68 + 52



In nearly all areas an increased trend towards design orientation is apparent – including machine construction. WERMA is actively involved in shaping this trend. You now have the possibility to order signal towers in the colour of your choice. To this end the terminal element, the cap and the fixing element (foot, tube or bracket) of the signal tower are painted in the desired colour.

- ✓ Signal towers in customer specific colours – complete range of RAL colours available
- ✓ Meets the demands of an increasing design orientation
- ✓ Simple ordering procedure



KombiSIGN-Highlights



Siren Element with self-adjusting sound output P. 51



By means of continuous measurement, the siren element adjusts its sound output to the ambient noise level. It drowns out the ambient noise by emitting a sound which is well audible without being irritatingly loud.

- ✓ Continual measuring of the ambient sound level
- ✓ Sound output is automatically adjusted to the background noise level
- ✓ Warning tone can be heard without being irritatingly loud
- ✓ Ideal for use in environments with changing ambient noise levels



Terminal Element with USB Interface P. 69 + 54

The Terminal Element with USB Interface is triggered directly by the PC, making it simple to initialise. Neither a separate power source nor additional hardware are necessary as the terminal element with USB interface is based on a standard interface



- ✓ Direct triggering of signal tower elements via USB Interface
- ✓ Easy activation
- ✓ Assembly includes installation software and USB connection cable
- ✓ No additional power supply or hardware necessary



Interface Box for KombiSIGN 71 P. 55



Many applications in the area of automatic control engineering require the signalisation of the current operating status. The commonly used control systems are often based around a PLC or PC. Many of these systems are nowadays equipped with one or more series interfaces. These are often not all in use.

These interfaces can, with minimal effort, be used to signal various operating states. The WERMA interface box is the perfect solution for such applications.

- ✓ Direct triggering from PC via RS 232 or RS 485 interfaces
- ✓ Programming of various drives via serial interface
- ✓ Triggering of up to 4 independent elements of a signal tower





KombiSIGN 71 - combine the diversity!

Configurator



Terminal elements for base mounting



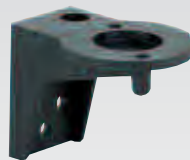
Improved
screwable
connection
Order no.
640 820 00



Terminal element
with CAGE CLAMP®
technology
Order no.
640 800 00



Contact box for
cable exit at side
Order no.
975 840 01



Bracket for
base mounting
Order no.
960 000 02



Bracket for 1-sided
mounting
Order no.
975 840 85



Bracket for 2-sided
mounting
Order no.
975 840 86

- Audible element **645**
- Permanent light **641**
- Flashing light **643**
- LED permanent light **644**
- LED blinking light **644**
- LED rotating light **644**
- NEW** EVS LED element **644**

(max. 5 signal elements can be combined)

Pay us a virtual visit.



The Signal Devices Site on the Internet

www.werma.com

With our new signal tower configurator you can put together your own individual signal tower.



Improved screwable connection

Order no. **640 830 00**



Terminal element with CAGE CLAMP® technology

Order no. **640 810 00**

Terminal elements for tube mounting



Tube with clamp

Order no. **960 000 18**



Adapter for single hole mounting

Order no. **960 000 25**



Base with integrated tube

Order no. **975 840 10**

Tube Ø 25 mm, all anodized
Order no.
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**

Base for Tube, plastic
Order no. **975 840 90**

Base for Tube, metal
Order no. **975 840 91**

Tube Ø 25mm, plastic, for direct mounting onto the Foldaway Base

Order no. **960 000 31**

Foldaway Base

Order no. **960 000 30**



Contact box for cable exit at side

Order no. **975 840 01**



Contact box with magnetic base and cable exit at side

Order no. **975 840 04**



Bracket for base mounting with concealed cable entry

Order no. **960 000 14**



Bracket for tube mounting

Order no. **960 000 01**



640

Signal Tower KombiSIGN 71

- High protection rating IP 65
- Signal tower system 70 mm Ø with modular construction
- Improved illumination
- Flexible combination of optical and audible elements



Bracket (accessory)

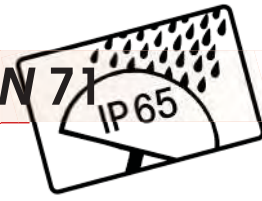


Base with tube (accessory)

i TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	Terminal element: 70 mm x 26.5 mm Light element: 70 mm x 65 mm Audible element: 70 mm x 72 mm
Housing:	Terminal element: PA fibreglass, high-impact Cap: PC
Dome:	PC, transparent Audible and ASI elements: PC
Fixing:	Base mounting Tube mounting, for tube Ø 25 mm Bracket mounting
Socket:	Bayonet, B 15 d, for bulbs max. 7 W
Connection:	CAGE CLAMP® technology max. 2,5 mm ² or screwable connection max. 2,5 mm ² Contact protection according to VDE
Cable entry:	Cable diameter max. 14 mm
Element seal:	Pre-mounted with each module
Protection rating:	Light elements: IP 65 Audible elements: IP 65 (Order no. 645 830 55 = IP 40)
Number of modules possible:	max. 5 / max. 10 elements with 2-sided bracket
Permanent light element	12 - 240 V≈ Bulb not included in assembly.
Flashing light element (Xenon)	24 V≈ 115 V~ 230 V~ Life duration: 4 x 10 ⁶ flashes Current consumption: 125 mA 20 mA 35 mA reduced for AS-Interface: 80 mA Flash frequency: c. 1 Hz Starting current: < 0.5 A at 24 V
NEW EVS LED Element	24 V≈ Starting consumption: < 500 mA Current consumption: 200 mA (red/yellow) 150 mA (green/clear/blue)
LED Permanent light element	24 V≈ 115 V~ 230 V~ Current consumption: < 30 mA < 20 mA < 20 mA Starting current: < 0.5 A at 24 V
LED Blinking light element	24 V≈ 115 V~ 230 V~ Current consumption: 25 mA 25 mA 25 mA Starting current: < 0.5 A at 24 V Blink frequency: c. 1 Hz
LED Flashing light element	24 V≈ Life duration: 50,000 hrs Current consumption: 45 mA (red/yellow) 40 mA (green/clear/blue) Starting current: < 0.5 A at 24 V Flash frequency: c. 1 Hz (Double Flash)
LED Rotating light element	24 V≈ Current consumption: 70 mA Starting current: < 0.5 A at 24 V Rotation frequency: c. 120 r.p.m.





Permanent / Flashing light element



Permanent light, clear with info



EVS LED element



LED element



ORDER SPECIFICATIONS OPTICAL ELEMENTS:

Permanent light	12-240 V			
red	641 100 00			
green	641 200 00			
yellow	641 300 00			
clear	641 400 00			
blue	641 500 00			

Bulb not included in assembly. Accessories see page 46.

Flashing light (Xenon)	24 V= (ASI)	24 V=	115 V~	230 V~
red	643 110 55	643 100 55	643 100 67	643 100 68
green	643 210 55	643 200 55	643 200 67	643 200 68
yellow	643 310 55	643 300 55	643 300 67	643 300 68
clear	643 410 55	643 400 55	643 400 67	643 400 68
blue	643 510 55	643 500 55	643 500 67	643 500 68

Compare the prices and advantages of an LED Flashing light

NEW

EVS LED Element	24 V=			
red	644 140 55			
green	644 240 55			
yellow	644 340 55			
clear	644 440 55			
blue	644 540 55			

LED Permanent light	24 V=	115 V~	230 V~
red	644 100 75	644 100 67	644 100 68
green	644 200 75	644 200 67	644 200 68
yellow	644 300 75	644 300 67	644 300 68
clear	644 400 75	644 400 67	644 400 68
blue	644 500 75	644 500 67	644 500 68

LED Blinking light	24 V=	115 V~	230 V~
red	644 110 75	644 110 67	644 110 68
green	644 210 75	644 210 67	644 210 68
yellow	644 310 75	644 310 67	644 310 68
clear	644 410 75	644 410 67	644 410 68
blue	644 510 75	644 510 67	644 510 68

LED Flashing light	24 V=		
red	644 120 55		
green	644 220 55		
yellow	644 320 55		
clear	644 420 55		
blue	644 520 55		

LED Rotating light	24 V=		
red	644 130 75		
green	644 230 75		
yellow	644 330 75		
clear	644 430 75		
blue	644 530 75		

Further voltages on request.



TECHNICAL DIAGRAMS:

see page 267





Audible element

Siren element with
self-adjusting sound output

Terminal element with cap



Vocal Element



GSM Transmitter Element



ORDER SPECIFICATIONS AUDIBLE ELEMENTS:

Buzzer element 85 dB, 25 mA, IP 65, Continuous or pulse tone	24 V \approx 645 800 75	115 V \approx 645 800 77	230 V \sim 645 800 68
Siren element 105 dB, 100 mA, IP 40 Continuous tone alternating	24 V \approx 645 830 55 no UL approval		
Multi-functional Siren 100 dB, IP 65, 8 different tones, adjustable sound output	24 V \approx / 80 mA 645 820 75	115 V \sim / 40 mA 645 820 67	230 V \sim / 40 mA 645 820 68
Multi-functional Siren, with external control 100 dB, 80 mA, IP 65, 7 diff. tones can be triggered externally, adjustable sound output	24 V \approx 645 850 55		
Siren element with self-adjusting sound output Technical specifications see page 51.	24 V \approx 645 810 55		



ORDER SPECIFICATIONS TERMINAL ELEMENTS:

Terminal element for tube mounting including cap	CAGE CLAMP® 640 810 00	Screw connection 640 830 00
Terminal element for bracket or base mounting including cap and seal	640 800 00	640 820 00
Terminal element with USB Interface (for tube mounting) Technical specifications and order specifications see page 54.	640 840 00	



ORDER SPECIFICATIONS KOMBISIGN HIGHLIGHTS:

Vocal Element for KombiSIGN 71 Technical specifications see page 49.	24 V \approx 645 840 55	
GSM transmitter element for KombiSIGN 71 Technical specifications see page 50.	24 V \approx 646 700 55	
AS-Interface element for KombiSIGN 71 Technical specifications see page 53.	Standard Slave 24 V \approx 646 830 55	A/B-Slave 24 V \approx 646 810 55

Accessories for Signal Tower KombiSIGN 71



ORDER SPECIFICATIONS ACCESSORIES:

	Contact box for cable exit at side, with mounting material	975 840 01
	Contact box with magnetic base and cable exit at side	975 840 04
	Bracket for tube mounting with cable gland	960 000 01
	Bracket for surface mounting with cable gland	960 000 02
	Bracket for base mounting with concealed cable entry, incl. rubber seals	960 000 14
	Bracket for 1-sided mounting, incl. rubber seals	975 840 85
	Bracket for 2-sided mounting, incl. rubber seals	975 840 86
	Tube with clamp, Ø 25 mm, 250 mm long, with cable gland	960 000 18
	Tube Ø 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
	NEW Foldaway Base incl. rubber seals, suitable for tube, Ø 25 mm, all anodized aluminium (Technical specifications see page 48)	960 000 30
	NEW Tube Ø 25 mm, plastic for mounting the Terminal Element directly on the Foldaway Base	960 000 31
	Base for tube mounting Ø 25 mm, plastic, incl. rubber seal	975 840 90
	Base for tube mounting Ø 25 mm, metal, incl. rubber seal, recommended for tube lengths of 400 mm and longer	975 840 91
	Base with integrated tube, Ø 25 mm, 110 mm long, plastic, incl. rubber seal	975 840 10
	Adapter for tube mounting, Ø 25 mm / 1/2" NPT thread	975 840 02
	Adapter for single hole mounting, Ø 25 mm, M 18	960 000 25
	Cable gland for surface mounting M 16 x 1.5 mm	960 000 04



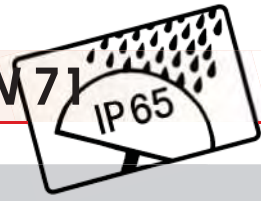
TECHNICAL DIAGRAMS:

see page 269





Accessories for Signal Tower KombiSIGN 71



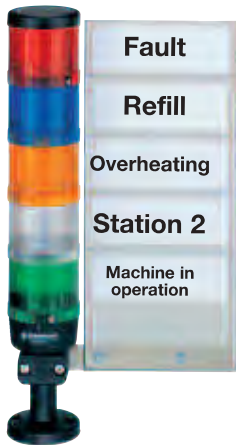
ORDER SPECIFICATIONS ACCESSORIES:



Bulb BA 15d, Total length max. 42 mm	
12 V, 5 Watt	955 840 34
24 V, 5 Watt	955 840 35
30 V, 5 Watt	955 840 32
115 V, 5 Watt	955 840 57
230 V, 5 Watt	955 840 38



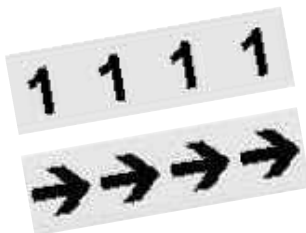
LED bulb BA 15d, total length max. 42 mm			
Voltage	24 V~	115 V~	230 V~
Current consumption	< 45 mA	< 15 mA	< 15 mA
red	956 100 75	956 100 67	956 100 68
green	956 200 75	956 200 67	956 200 68
yellow	956 300 75	956 300 67	956 300 68
white	956 400 75	956 400 67	956 400 68
blue	956 500 75	956 500 67	956 500 68
	for permanent light 641	for permanent light 641	for permanent light 641



Indication Board

- Indication Board for one to five modules
- Simple mounting onto signal tower tube
- Ample space for written information
- Simply break off unwanted segments

Dimensions of indication board (W x H):	153 x 345 mm
Surface area per section (W x H):	c. 140 x 50 mm
Material:	PMMA
Assembly:	Indication board (5 sections) incl. mounting material
Mounting:	Fixing only possible on 25 mm diameter tube
Indication board	960 000 05



Info transparencies: (to place inside optical elements)

neutral	975 840 49	number „6“	975 840 56
number „0“	975 840 50	number „7“	975 840 57
number „1“	975 840 51	number „8“	975 840 58
number „2“	975 840 52	number „9“	975 840 59
number „3“	975 840 53	number „10“	975 840 92
number „4“	975 840 54	arrow	975 840 62
number „5“	975 840 55		



ADDITIONAL INFORMATION:

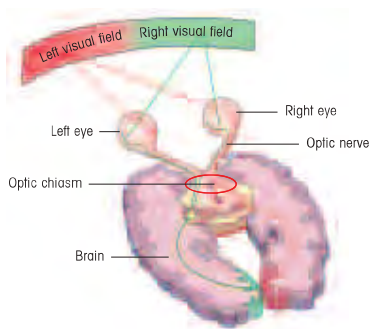
You will find an overview of the entire range of accessories for KombiSIGN Signal Towers on pages 76 and 77.

TECHNICAL DIAGRAMS:

see page 269 + 270 + 271



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



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

- 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, with 2-sided bracket max. 10
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:

Voltage	24 V $\overline{=}$
red	644 140 55
green	644 240 55
yellow	644 340 55
clear	644 440 55
blue	644 540 55

⚠ ADDITIONAL INFORMATION:

EVS – Attention-grabbing light effect on neurobiological basis

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.

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 effectiveness in attracting attention. In a multistage 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.

* EVS = Enhanced Visibility System

📏 TECHNICAL DIAGRAMS:

see page 267



**640**

Foldaway Base for KombiSIGN 71



NEW
German utility model

Maximum stability even with strong shocks and vibrations thanks to the locking mechanism



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



Vertical alignment of Signal Towers even on sloping surfaces

- The signal tower can be folded away while still connected
- Minimises packaging costs 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, markings for 30, 45, 60 or 90 degrees

i TECHNICAL SPECIFICATIONS:

Dimensions (Ø 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, Ø 25 mm, all anodized aluminium, not included in assembly (accessory)

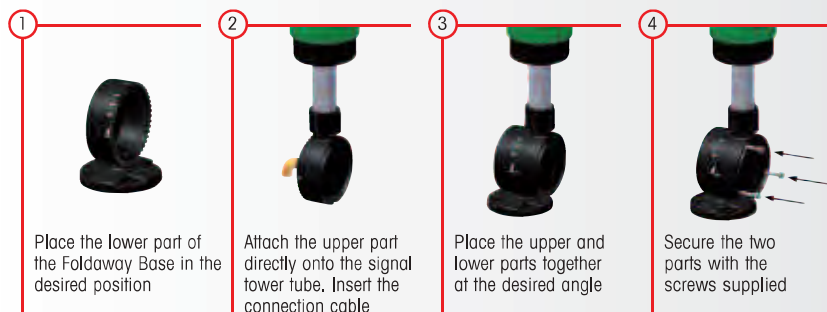
🛒 ORDER SPECIFICATIONS:

Foldaway Base for KombiSIGN 71 **960 000 30**

🏠 ACCESSORIES:

Tube Ø 25 mm, plastic 45 mm long, for direct mounting of the Terminal Element onto the Foldaway Base	960 000 31
Tube Ø 25 mm, all anodized aluminium, see page 45	
Cable gland M 16 x 1.5 mm	960 000 04

✓ QUICK AND SIMPLY MOUNTING:



📏 TECHNICAL DIAGRAMS:

see page 271



645

Vocal Element for KombiSIGN 71

German utility model



The vocal element can be combined with up to 3 signal elements.



Individual texts can be recorded via the headset with microphone directly on to the PC (accessory, specific version may vary from photo)

- Plays customer specific audio files in mp3 format (tones, songs and spoken texts)
- Easy programming via USB interface
- Excellent sound quality
- Up to 60 minutes replay capacity
- Positive and negative logic possible
- Adjustable sound output

TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	71.5 mm x 110 mm
Housing:	PC
Current consumption:	400 mA
Integrated memory:	approx. 60 min. of replay capacity
Number of sequences recordable:	15
Programming:	via USB connection cable from PC
Sound output:	adjustable
Number of additionally signal elements:	max. 3
Assembly includes USB connection cable.	

mp3 compatible

ORDER SPECIFICATIONS:

24 V=
645 840 55

ACCESSORIES:

Headset with microphone 960 645 01

TECHNICAL DIAGRAMS:

see page 268

This Signal Tower communicates with you – the WERMA Vocal Element!



- Plays customer specific audio files in mp3 format (tones, songs and spoken texts)
- Easy programming via USB interface
- Excellent sound quality
- Up to 60 minutes replay capacity
- Adjustable sound output




Signal Towers • modular KombiSIGN 71





646

GSM Transmitter Element for KombiSIGN 71

Patent Pending



- Unique Signal Tower solution
- GSM transmitter element can be simply integrated into an existing signal tower
- Activation without the need for programming
- Malfunction signalled by signal tower is transmitted via SMS to a mobile phone
- No additional power supply
- Also suitable for US frequencies (Quadband)

i TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	70 mm x 65 mm
Housing:	PC
Current consumption:	50 mA
Max. current draw (momentary):	450 mA
Operating voltage:	24 V $\overline{=}$
GSM frequency:	850, 900, 1800 bzw. 1900 MHz
Plug-in slot for SIM card:	integrated (SIM card is not included in assembly)
Antenna connection:	FME plug connector (bracket antenna included)

🛒 ORDER SPECIFICATIONS:

24 V $\overline{=}$
646 700 55

📏 TECHNICAL DIAGRAMS:

see page 268



Class 2



645 Siren Element with self-adjusting sound output for KombiSIGN 71

Patent approved



- Automatic sound output adjustment between 80 and 100 dB depending on background noise level
- Ideal for applications with changing ambient sound levels
- High protection rating IP 65

i TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	71.5 mm x 110 mm
Housing:	PC
Current consumption:	< 150 mA
Starting current:	< 500 mA
Tone type:	Pulse tone
Tone frequency:	2.5 KHz
Operating voltage:	24 V $\overline{=}$
Sound output:	80 dB - max. 100 dB

Loud enough
yet
not disturbing!

🛒 ORDER SPECIFICATIONS:

24 V $\overline{=}$
645 810 55

⚠️ ADDITIONAL INFORMATION:

The siren element adjusts its sound output through continual measurement of the ambient noise level. The emitted tone is c. 5 dB louder than the background noise level. The warning signal can always be heard without being irritatingly loud for people in the sounder's vicinity.



📏 TECHNICAL DIAGRAMS:

see page 268





640

KombiSIGN 71 with customer specific coloured coatings



The Signal Towers are designed to harmonise with the colour of the customer's product design, guaranteeing a uniform appearance.



The KombiSIGN signal towers 71 can be coated in any colour within the RAL spectrum.

- Signal towers in customer specific colours
- Meets the demands of an increasing design preference
- Simple ordering procedure
- Complete range of RAL colours available
- High protection rating IP 65

i TECHNICAL SPECIFICATIONS:

Dimensions Terminal Elements (Ø x Height):	70 mm x 26.5 mm
Housing Terminal Elements:	PA-GF, fibreglass, high-impact, Cap: PC
Connection:	CAGE CLAMP® technology max. 2.5 mm ² Contact protection according to VDE
Cable entry:	Cable diameter max. 14 mm
Number of modules possible:	max. 5

🛒 ORDER SPECIFICATIONS TERMINAL ELEMENTS:

Terminal element for tube mounting, coated including cap	CAGE CLAMP® 640 710 00	Screw connection 640 730 00
Terminal element for bracket or base mounting, coated including cap and seal	640 700 00	640 720 00

Please state the required RAL number

🏠 ACCESSORIES:

Base with integrated tube, coated, Ø 25 mm, 110 mm long, plastic, incl. rubber seal	960 000 24
Bracket for 1-sided mounting, coated, incl. rubber seals	960 000 22
Minimum order quantity	10 pieces
Delivery time	by arrangement
Colour Finish:	mat or gloss

⚠️ ADDITIONAL INFORMATION:

Please state the required RAL number and colour finish (mat or gloss) with each of your orders. Slight colour deviations are possible.



📏 TECHNICAL DIAGRAMS:

see page 267



Cable not included in assembly



LEDs display the current status

- Light diodes indicate current status
- 31 or 62 addresses
- Available with standard or new A/B technology
- Voltage supply switchable from internal bus supply to additional external voltage supply
- With addressing socket



The KombiSIGN Signal Towers 70 and 71 with AS-Interface Element are capable of total communication: Through simple integration of an AS-Interface Element the actuators are connected to the networking system Actuator-Sensor-Interface – this considerably reduces complex wiring. The necessary power supply source (supply via bus or external) can be selected with a switch. This element is mounted as the first tier of the individual signal tower directly on top of the terminal element. (Further Information see pages 11 and 38).

i TECHNICAL SPECIFICATIONS:

	Standard Slave	A/B-Slave
Number of addresses	max. 31	max. 62
Number of signal elements	max. 4	max. 3
Type of signal elements	Permanent light elements Flashing light elements LED elements Buzzer elements Siren elements	Permanent light elements Flashing light elements LED elements Buzzer elements Siren elements
IO-Code	8	8
ID-Code	F	A
ID2-Code	–	E
Outputs	4 semiconductor relays	3 semiconductor relays
Approved in accordance with	Spec. V 3.0	Spec. V 3.0

Specif. Power supply	
AS-Interface Element	via bus conduction
Operating voltage	25 V ... 31.6 V according to the AS Interface specification
Reverse battery protection	integrated
Watchdog	integrated
Additional external voltage	24 V +/- 10% =

	With internal add. voltage	With external add. voltage
Current carrying cap. Σ I _{max}	200 mA	200 mA per signal element
Current consumption max	250 mA	75 mA
Voltage at signal element	18 V - 31 V	24 V +/- 10%
Short circuit/overload protection	integrated	pre-fuse M 1.6 A

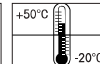
ORDER SPECIFICATIONS:

Standard Slave	646 830 55
A/B-Slave	646 810 55

TECHNICAL DIAGRAMS:

see page 267

Class 2





640

Terminal Element with USB Interface for KombiSIGN 71



Assembly includes
USB connecting cable



Base for tube (metal) and
tube Ø 25 mm (accessories)

- Direct triggering of signal tower elements via USB Interface
- Easy activation
- Can be combined with up to 4 signal elements
- Assembly includes installation software and USB connection cable
- No additional power supply necessary
- No additional hardware needed

TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	68,5 mm x 41 mm
Material:	PA-GF, shock resistant
Fixing:	Tube mounting
Connection:	USB-Bus
	Assembly includes installation software and USB connection cable (AWG 22), 2 m long Maximum permitted length of USB cable (min. AWG 22): 7 m

Current carrying capacity	
I_{max}:	100 mA

ORDER SPECIFICATIONS:

24 V=
640 840 00

ACCESSORIES:

Base with integrated tube		975 840 10
Tube mounting with base for tube (metal) and tube Ø 25 mm		975 840 91
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

ADDITIONAL INFORMATION:

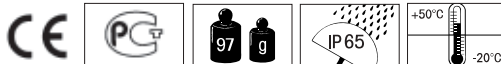
In many applications, it is necessary to indicate operating states or faults by means of an optical signal. A PLC or machine controller is not available in all areas; PCs are often also connected to control the machines.

The optimal solution for this is the terminal element with USB interface for KombiSIGN 70, 71 and Kompakt 71.

This innovation in the field of signal towers is controlled directly from the PC and can therefore be put into operation easily and in an uncomplicated manner. Neither a separate power supply nor additional hardware is required because the terminal element with USB interface is based on a standard USB interface.

TECHNICAL DIAGRAMS:

see page 268



Interface Box for KombiSIGN 71



Assembly:
Interface Box and
terminal element for
signal tower KombiSIGN 71



Assembly without
laptop and signal tower elements

- Direct triggering from PC via RS 232 or RS 485 interfaces
- Programming of various drives via serial interface
- Triggering of up to 4 independent elements of a KombiSIGN signal tower
- Up to 127 signal towers can be addressed (RS 485)
- Monitoring of each element possible
- Versions for Bus systems available on request

TECHNICAL SPECIFICATIONS:

Dimensions of interface box (L x W x H): 80 x 80 x 66 mm

Material: ABS

Drive: 24 V $\overline{=}$

Interfaces: RS 232, RS 485

Assembly:	960 000 16	960 000 17
	<ul style="list-style-type: none"> • Interface box • Terminal element • 2 cable glands M16 	<ul style="list-style-type: none"> • Interface box • Terminal element • 1 cable gland M16 • Network appliance with cable • Connection cable RS 232, 2 m long, with Sub-D 9-pin and socket for power supply • CD with demonstration programme • Programming handbook

ORDER SPECIFICATIONS:

Interface box 960 000 16

Interface box incl. accessories 960 000 17

TECHNICAL DIAGRAMS:

see page 270

