

# KombiS/GN 70 and 71 Signal Towers



## 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



## The advantages at a glance

- ✓ Signal elements in every common voltage
- ✓ Modular system allows combination as required
- ✓ High protection rating IP 54 or IP 65
- ✓ Wide range of optical and audible elements
- ✓ LED technology ensures even better visibility
- ✓ Attention-grabbing light effects (e.g. EVS)
- ✓ Wide range of terminal elements



# KombiSIGN 71 Signal Tower

## The Highlights for KombiSIGN 71



### 644 LED Permanent light element ultrabright



- Up to 20 times brighter than conventional LED elements
- Maximum brightness via intelligent LED control

See page 35

### 644 LED EVS element



- Attention-grabbing flickering light
- Extremely powerful signal effect
- Random sequence of light signals prevents acclimatisation effect

See page 36

### 644 LED Permanent light element multicolour



- 7 colours in one beacon
- Multiple status warnings can be signalled by one beacon
- High light intensity

See page 37

**NEW**

### 645 Vocal element



- 102 dB loud vocal element with excellent tone and sound quality
- Sound output level can be triggered externally

See page 40 + 41

### 645 Siren element with self-adjusting sound output



- Sound output is automatically adjusted to the background noise level
- Warning tone can be heard without being irritatingly loud

See page 42

**NEW**

### 640 Terminal element M12



- Quick and easy installation
- With practical M12 connector

See page 43

### 640 Terminal element with USB Interface



- Direct triggering of signal tower elements via USB Interface
- Easy activation

See page 43

### 646 AS-Interface element



- LEDs indicate current status
- 31 or 62 addresses
- Available with standard or A/B technology

See page 45

### Machine Data Collection Systems (MDC Systems)



- Wireless based machine data collection
- Monitoring and counting system for multiple machines

See page 12

### Manual Call Systems



- Improve the efficiency of production processes your operation.
- Indicate status conditions and problems at the touch of a button.

See page 20

## Further information

Further Information and applications for "KombiSIGN Signal Towers" can be found in the chapter "Systems" beginning on page 11.

# Signal Towers KombiSIGN 71

## This is how you can assemble your KombiSIGN 71 signal tower

### ► STEP 1

Select the required optical or audible elements in the correct voltage (for details see page 33).

Many KombiSIGN highlights are also available (for details see page 31).

**Audible Signal Elements**

- Buzzer element
- Siren element
- Vocal element

**Optical Signal Elements**

- (LED) Permanent light
- LED Permanent light ultrabright
- (LED) Flashing light
- LED EVS element
- LED Blinking light
- LED Rotating light
- LED Permanent light element multicolour

### ► STEP 2

Select the appropriate mounting option for your application.

### ► STEP 3

Select the correct terminal element for your mounting option (for details see page 43).

Base Mounting	Tube Mounting
<p>Terminal element with CAGE CLAMP® technology Order no. <b>640 800 00</b></p>	<p>Terminal element with CAGE CLAMP® technology Order no. <b>640 810 00</b></p>
<p>Screw terminal Order no. <b>640 820 00</b></p>	<p>Screw terminal Order no. <b>640 830 00</b></p>
<p>Terminal element M12 Order no. <b>640 850 55</b></p>	<p>Terminal element M12 Order no. <b>640 860 55</b></p>

### ► STEP 4

Where appropriate, select a base and the desired tube length (only for tube mounting) (For details see page 67).

<p>Tube with clamp Order no. <b>960 000 18</b></p>	<p>Adaptor for single hole mounting Order no. <b>960 000 25</b></p>	<p>Base with integrated tube Order no. <b>975 840 10</b></p>	<p>Tube Ø 25 mm, all anodized Order no.</p> <p>100 mm long <b>975 845 10</b></p> <p>250 mm long <b>975 840 25</b></p> <p>400 mm long <b>975 840 40</b></p> <p>600 mm long <b>975 840 60</b></p> <p>800 mm long <b>975 840 80</b></p> <p>1000 mm long <b>975 840 03</b></p> <p>Base for Tube, plastic Order no. <b>975 840 90</b></p> <p>Base for Tube, metal Order no. <b>975 840 91</b></p> <p>Foldaway Base Order no. <b>960 000 30</b></p> <p>Foldaway Base Order no. <b>960 009 12</b></p> <p>Tube Ø 25 mm, plastic, only for Foldaway Base, 45 mm long Order no. <b>960 000 31</b></p>
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### ► STEP 5

Where appropriate, select the bracket and the contact box (for details see page 67).

### TIP

The Signal Devices Site on the Internet: [www.werma.com](http://www.werma.com)

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

<p>Contact box for cable exit at side Order no. <b>975 840 01</b></p>	<p>Contact box for cable exit at side Order no. <b>975 840 01</b></p>
<p>Bracket for base mounting Order no. <b>960 000 02</b></p>	<p>Contact box with magnetic base and cable exit at side Order no. <b>975 840 04</b></p>
<p>Bracket for 1-sided mounting Order no. <b>975 840 85</b></p>	<p>Bracket for base mounting with concealed cable entry Order no. <b>960 000 14</b></p>
<p>Bracket for 2-sided mounting Order no. <b>975 840 86</b></p>	<p>Bracket for tube mounting Order no. <b>960 000 01</b></p>
<p>Corner fixing bracket Order no. <b>960 000 41</b></p>	<p>Corner fixing bracket Order no. <b>960 000 41</b></p>



KombiSIGN signal tower with bracket (accessory)



Base with tube (accessory)

- Signal tower system 70 mm Ø with modular construction
- Improved illumination

**i TECHNICAL SPECIFICATIONS:**

<b>Dimensions (Ø x Height):</b>	70 mm x 65.5 mm
<b>Lens:</b>	PC, transparent
<b>Socket:</b>	Bayonet, BA15d, for bulbs max. 5 W
<b>Element seal:</b>	Pre-mounted with each module
<b>Protection rating:</b>	IP 65

<b>Permanent light element</b>	12-240 V AC/DC
Life duration:	Bulb not included in assembly. Dependent upon the bulbs used

<b>LED Permanent light element</b>	24 V AC/DC	115 V AC	230 V AC
Current consumption:	< 30 mA	< 20 mA	< 20 mA
Life duration:	50,000 hrs		

<b>LED Permanent light element ultrabright</b>	24 V DC
Current consumption:	Max. 195 mA
Life duration:	Up to 50,000 hrs
Technical specifications see page 35.	

<b>Flashing light element (Xenon)</b>	24 V DC	115 V AC	230 V AC
Current consumption:	125 mA	22 mA	15 mA
Life duration:	4 x 10 <sup>6</sup> flashes		
Reduced for AS-Interface:	80 mA		
Flash frequency:	C. 1 Hz		

<b>LED Flashing light element</b>	24 V DC
Current consumption:	< 30 mA (red/yellow) < 25 mA (green/clear/blue)
Life duration:	50,000 hrs
Flash frequency:	C. 1 Hz (Double Flash)

<b>LED EVS* element</b>	24 V AC/DC
Current consumption:	350 mA (red/yellow) 250 mA (green/clear/blue)
Life duration:	50,000 hrs
* EVS = Enhanced Visibility System	
Technical specifications see page 36.	

<b>LED Blinking light element</b>	24 V AC/DC	115 V AC	230 V AC
Current consumption:	25 mA	25 mA	25 mA
Life duration:	50,000 hrs		
Blink frequency:	C. 1 Hz		

<b>LED Rotating light element</b>	24 V AC/DC
Current consumption:	40 mA
Life duration:	50,000 hrs
Rotation frequency:	C. 120 r.p.m.

<b>LED Permanent light element multicolour</b>	24 V DC
Life duration:	50,000 h
Current consumption:	< 120 mA
Possible colours:	Red, yellow, green, white, blue, violet, turquoise
Technical specifications see page 37.	

643 X10 55 Class 2 See note on page 347 24 V



(LED) Permanent/Flashing element



Permanent light element, clear with info



LED EVS element



LED element



LED element (multicolour)

ORDER SPECIFICATIONS OPTICAL ELEMENTS:

<b>Permanent light element</b>	12-240 V AC/DC		
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 67.			

<b>LED Permanent light element</b>	24 V AC/DC	115 V AC	230 V AC
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

<b>LED Permanent light element ultrabright</b>	24 V DC		
red	644 180 55		
green	644 280 55		
yellow	644 380 55		
clear	644 480 55		
blue	644 580 55		

<b>Flashing light (Xenon)</b>	24 V DC (ASI)	24 V DC	115 V AC	230 V AC
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

<b>LED Flashing light element</b>	24 V DC		
red	644 120 55		
green	644 220 55		
yellow	644 320 55		
clear	644 420 55		
blue	644 520 55		

<b>LED EVS element</b>	24 V DC		
red	644 140 55		
green	644 240 55		
yellow	644 340 55		
clear	644 440 55		
blue	644 540 55		

<b>LED Blinking light element</b>	24 V AC/DC	115 V AC	230 V AC
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

<b>LED Rotating light element</b>	24 V AC/DC		
red	644 130 75		
green	644 230 75		
yellow	644 330 75		
clear	644 430 75		
blue	644 530 75		

<b>LED Permanent light element multicolour</b>	24 V DC		
multicolour	644 450 55		

Further voltages on request.

TECHNICAL DIAGRAMS: see page 309

# LED Permanent Light Element ultrabright for KombiSIGN 71



- Up to 20 times brighter than conventional LED elements
- Extremely good visibility - even in direct sunlight
- Maximum brightness via intelligent LED control

Life duration  
up to 50,000 hrs

**i TECHNICAL SPECIFICATIONS:**

Dimensions (Ø x Height):	70 mm x 65.5 mm
Lens:	PC, transparent
Seal:	Pre-mounted with each element
Number of modules possible:	5, with 2-sided bracket max. 10

**🛒 ORDER SPECIFICATIONS:**

Voltage	24 V DC
Current consumption	Max. 195 mA
red	<b>644 180 55</b>
green	<b>644 280 55</b>
yellow	<b>644 380 55</b>
clear	<b>644 480 55</b>
blue	<b>644 580 55</b>

**⚠️ ADDITIONAL INFORMATION:**

**Sophisticated triggering**

Thanks to its sophisticated triggering, the innovative LED element "ultrabright" is up to 20 times brighter than conventional LED elements - making it almost certainly the brightest permanent light that the world of signalling technology currently has to offer.

Further information can be found in the chapter "General Information" beginning on page 366.

**📐 TECHNICAL DIAGRAMS:**

see page 309



The high level of brightness guarantees good visibility - even in direct sunlight



Maximum brightness via intelligent LED control



See note on page 347



Patent  
approved



- Attention-grabbing flickering light
- 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:

Life duration  
up to 50,000 hrs

Dimensions (Ø x Height):	70 mm x 65 mm
Lens:	PC, transparent
Seal:	Pre-mounted with each element
Number of modules possible:	5, with 2-sided bracket max. 10

### **🛒** ORDER SPECIFICATIONS:

Voltage	24 V DC	24 V DC
Current consumption	350 mA	250 mA
red	<b>644 140 55</b>	-
green	-	<b>644 240 55</b>
yellow	<b>644 340 55</b>	-
clear	-	<b>644 440 55</b>
blue	-	<b>644 540 55</b>

### **⚠** ADDITIONAL INFORMATION:

\* EVS = Enhanced Visibility System  
Further Information can be found in the chapter "General Information" on page 352.

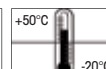
Please note the photosensitive epilepsy warning on page 352.

### **📐** TECHNICAL DIAGRAMS:

see page 309



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



See note  
on page 347



# LED Permanent Light Element multicolour for KombiSIGN 71



The LED permanent light element multicolour offers a life duration of up to 50,000 hrs

- Seven colours in one beacon
- Multiple status warnings can be signalled by one beacon
- Different colours can be triggered via the pins in the terminal element
- Positive and negative control logic
- The three basic colours (red/yellow/green) can be triggered using only two PLC outputs
- High light intensity

Life duration up to 50,000 hrs

### TECHNICAL SPECIFICATIONS:

Dimensions Terminal Elements (Ø x Height):	70 mm x 65.5 mm
Lens:	PC, transparent
Light effect:	LED permanent
Possible Colours:	Red, yellow, green, white, blue, violet, turquoise
Seal:	Pre-mounted with each element
Number of modules possible:	Max. 3 (including multicolour element)

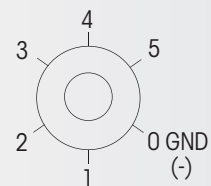
### ORDER SPECIFICATIONS:

Voltage	24 V DC
Current consumption	< 120 mA
LED permanent light multicolour	<b>644 450 55</b>

### ADDITIONAL INFORMATION:

Simple external activation via the pins in the terminal element.

Pin 1	Pin 2	Pin 3	Function
24 V	-	-	Red
-	24 V	-	Green
24 V	24 V	-	Yellow
-	-	24 V	Blue
24 V	24 V	24 V	White
24 V	-	24 V	Violet
-	24 V	24 V	Turquoise



7 colours in one beacon: red, yellow, green, white, blue, violet and turquoise

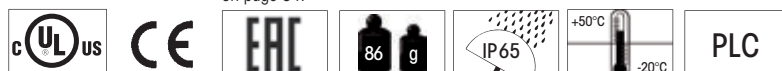
### TECHNICAL DIAGRAMS:

see page 309



The Multicolour Element can be combined with up to 2 additional signal elements

See note on page 347







Bracket (accessory)

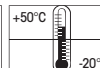
Three tier signal tower with vocal  
element and tube with integrated  
base (accessory)

- Audible element sound output up to 105 dB
- Plays back pre-recorded music files or customised audio files

**i TECHNICAL SPECIFICATIONS:**
**Life duration  
up to 5,000 hrs**

<b>Dimensions (Ø x Height):</b>	See below		
<b>Lens:</b>	PC		
<b>Element seal:</b>	Pre-mounted with each module		
<b>Protection rating:</b>	IP 65 (Order no. 645 830 55 = IP 40)		
<b>Buzzer element</b>	24 V AC/DC	115 V AC	230 V AC
Current consumption:	25 mA		
Dimensions (Ø x Height):	70 mm x 72 mm		
Sound output:	85 dB		
Number/Tone type:	Continuous or pulse tone		
<b>Siren element</b>	24 V DC		
Current consumption:	150 mA		
Dimensions (Ø x Height):	70 mm x 79 mm		
Sound output:	105 dB		
Number/Tone type:	Continuous tone alternating		
Further Information:	No UL approval		
<b>Multi-functional Siren</b>	24 V AC/DC	115 V AC	230 V AC
Current consumption:	80 mA	40 mA	40 mA
Dimensions (Ø x Height):	70 mm x 72 mm		
Sound output:	100 dB, adjustable sound output		
Number/Tone type:	8 tones adjustable		
<b>Multi-functional Siren, with external control</b>	24 V DC		
Current consumption:	80 mA		
Dimensions (Ø x Height):	70 mm x 72 mm		
Sound output:	100 dB, adjustable sound output		
Number/Tone type:	Number of tones dependent on the number of optical elements		
Further Information:	No UL approval		
Tone triggering:	7 diff. tones can be triggered externally		
<b>Siren element with self-adjusting sound output</b>	24 V DC		
Technical specifications see page 42.			
<b>Vocal element</b>	24 V DC		
Technical specifications see page 40.			
<b>High output vocal element</b>	24 V DC		
Further Information:	No UL approval		
Technical specifications see page 41.			


**ORDER SPECIFICATIONS AUDIBLE ELEMENTS: see next page**

 See note  
on page 347


24 V





Audible element



**ORDER SPECIFICATIONS AUDIBLE ELEMENTS:**

Buzzer element	24 V AC/DC 645 800 75	115 V AC 645 800 77	230 V AC 645 800 68
Siren element	24 V DC 645 830 55		
Multi-functional Siren	24 V AC/DC 645 820 75	115 V AC 645 820 67	230 V AC 645 820 68
Multi-functional Siren, with external control	24 V DC 645 850 55		
Siren element with self-adjusting sound output	24 V DC 645 810 55		
Vocal element	24 V DC (max. 88 dB) 645 840 55		
<b>NEW</b> High output vocal element	24 V DC (max. 102 dB) 645 860 55		



Siren element with self-adjusting sound output



Vocal element with up to 88 dB



**TECHNICAL DIAGRAMS:**

see page 309 onwards



**NEW**  
High output vocal element with up to 102 dB



German utility  
model approved



The vocal element can  
be combined with up to  
4 signal elements

- Plays customer-specific audio files in mp3 format (signal tones, music or spoken text)
- Enables clear instructions to be given in a range of foreign languages
- Outstanding tonal and sound quality
- Easy transfer of audio files and simple operation
- Setting of individual playlists and playback modi possible



#### TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 111 mm
Housing:	PC
Number of signal elements:	Max. 4 additional signal elements possible
Sound output:	Adjustable, up to 88 dB
File Transfer:	Via USB connection and provided software
Possible data format:	Mp3 and wav files
Number of sequences:	15 files can be remotely triggered depending on the number of signal elements used or one sequence with max. 50 files
Suitable for:	Windows 2000 SP 4, Windows XP, Windows Vista, Windows 7
Assembly:	Vocal element, USB connection cable and software

Life duration  
up to 5,000 hrs



#### ORDER SPECIFICATIONS:

Voltage	24 V DC
Current consumption	< 500 mA
Vocal element	645 840 55



#### TECHNICAL DIAGRAMS:

see page 310

See note  
on page 347



**NEW**



The vocal element can be combined with up to 4 signal elements

- 102 dB high output vocal element with excellent tone and sound quality
- Plays customer-specific audio files (signal tones, music and spoken text)
- Easy transfer of audio files and simple operation
- Sound output level can be triggered externally
- Creation of individual playlists and playback modes possible

**i TECHNICAL SPECIFICATIONS:**

**Life duration up to 5,000 hrs**

Dimensions (Ø x Height):	125 mm x 118 mm
Housing:	PC/ABS Blend
Lens:	PC
Number of signal elements:	Max. 4 additional signal elements possible
Sound output:	Adjustable, up to 102 dB
File Transfer:	Via USB connection and provided software
Possible data format:	Mp3 and wav files
Number of sequences:	15 files can be remotely triggered depending on the number of signal elements used or one sequence with max. 50 files
Suitable for:	Windows 2000 service pack 4, Windows XP, Windows Vista, Windows 7, Windows 8
Assembly:	Vocal element, USB connection cable and software

**ORDER SPECIFICATIONS:**

Voltage	24 V DC
Current consumption	≤ 400 mA
Vocal element	<b>645 860 55</b>

**! ADDITIONAL INFORMATION:**

Further installation examples:



To ensure IP protection it is recommended that the vocal element is fitted with the sound outlet facing downwards.

Optimum distribution of sound is thus ensured.

**TECHNICAL DIAGRAMS:**

see page 310



User-friendly software ensures easy transfer of audio files and simple operation

See note on page 347

