



Signal Tower KombiS/IGN 70

This is how you can assemble your KombiS/IGN 70 signal tower!

► STEP 1

Select the required optical or audible elements.

Many KombiS/IGN highlights are also available (for details see page 37).



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

► STEP 2

Select the appropriate mounting option for your application.

► STEP 3

Select the correct terminal element for your mounting option.

Base Mounting



Terminal element for base mounting
Order no. **840 085 00**

Tube Mounting



Terminal element for tube mounting
Order no. **840 080 00**

► STEP 4

Where appropriate, select a base and the desired length (only for tube mounting).



Tube with clamp
Order no. **960 000 18**



Adaptor 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**



Foldaway Base
Order no. **960 000 30**



Tube Ø 25 mm, plastic, only for Foldaway Base, 45 mm long
Order no. **960 000 31**

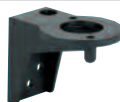


► STEP 5

Where appropriate, select the bracket and the contact box.



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



Bracket for base mounting
Order no. **960 000 02**



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 1-sided mounting
Order no. **975 840 85**



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



Bracket for base mounting with concealed cable entry
Order no. **960 000 14**



Bracket for tube mounting
Order no. **960 000 01**

TIP

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.

The Highlights for KombiSIGN 70

NEW

WIN – Wireless Information Network



- Economical wireless-based Machine Data Collection system (MDC system)
- Central monitoring of a wide range of different machines via PC

See page 43

NEW

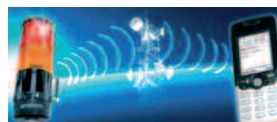
KombiSIGN reflect



- Simple monitoring of signal towers out of view
- Signal tower "reflection" to a central location

See page 44

GSM Transmitter Element



- Malfunction signalled by signal tower is transmitted via SMS or call to a mobile phone
- Activation without the need for programming
- No additional power supply needed

See page 45

AS-Interface Element



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

See page 46

NEW

LED Permanent Light Element ultrabright



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

See page 47

LED Flashing Light Element



- Extremely long life duration up to 50,000 hrs
- Low current consumption
- Shock-proof and vibration resistant

See page 38

LED EVS Element



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

See page 48

Vocal Element



- Plays customer-specific audio files in mp3 format (sounds, alarms, music or spoken text)
- Easy programming via USB interface
- Up to 60 minutes replay capacity

See page 49

NEW

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 50

Terminal Element with USB Interface



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

See page 51

Customer specific coloured coatings



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

See page 52

Foldaway base



- Enables signal towers to be folded down completely, even when connected
- Vertical alignment of signal towers even on sloping surfaces

See page 53



840

Signal Tower KombiSIGN 70



Base with tube (accessory)



Bracket (accessory)



Tube mounting (accessory)

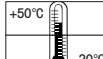
- Signal tower system 70 mm Ø with modular construction
- 360° visibility
- Wide range of optical and audible elements
- Elements can be assembled as required



TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	Terminal element: 70 mm x 30.5 mm Light element: 70 mm x 65.5 mm Audible element: 70 mm x 72/79/110 mm		
Housing:	Terminal element: PA fibreglass, high-impact Cap: PC/ABS-Blend		
Lens:	PC, transparent Audible and ASI elements: PC/ABS-Blend		
Fixing:	Base mounting Tube mounting, for tube Ø 25 mm Bracket mounting (accessory)		
Socket:	Bayonet, B15d, for bulb max. 7 W		
Connection:	Screw terminal 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 54 Audible elements: IP 54 (Order no. 844 123 55 = IP 40)		
Number of modules possible:	Max. 5 /with 2-sided bracket max. 10 elements		
Permanent light element	12 - 240 V≈ Bulb not included in assembly		
LED Permanent light element	24 V≈ 115 V~ 230 V~		
Current consumption:	< 30 mA < 20 mA < 20 mA		
LED Permanent light element ultrabright	24 V≈		
Life duration:	Up to 50,000 hrs		
Current consumption:	Max. 190 mA		
Up to 20 times brighter than conventional LED beacons.			
Flashing light element (Xenon)	24 V≈ 115 V~ 230 V~		
Life duration:	4 x 10 ⁶ flashes		
Current consumption:	125 mA 22 mA 15 mA		
Reduced for AS-Interface:	80 mA		
Flash frequency:	c. 1 Hz		
LED Flashing light element	24 V≈		
Life duration:	50,000 hrs		
Current consumption:	< 30 mA (red/yellow) < 25 mA (green/clear/blue)		
Flash frequency:	c. 1 Hz (Double Flash)		
LED EVS* element	24 V≈		
Current consumption:	350 mA (red/yellow) 250 mA (green/clear/blue)		
* EVS = Enhanced Visibility System			
LED Blinking light element	24 V≈ 115 V~ 230 V~		
Current consumption:	25 mA 25 mA 25 mA		
Blink frequency:	c. 1 Hz		
LED Rotating light element	24 V≈		
Current consumption:	70 mA		
Rotation frequency:	c. 120 r.p.m.		

Improved light effect

Improved
light effect

24 V



(LED) Permanent/
Flashing light element

Permanent light, clear with info



LED EVS element



LED element

Life duration
up to 50,000 hrs

ORDER SPECIFICATIONS OPTICAL ELEMENTS:



Permanent light element	12-240 V ≈
red	840 100 00
green	840 200 00
yellow	840 300 00
clear	840 400 00
blue	840 500 00
Bulb not included in assembly. Accessories see page 42.	

LED Permanent light element	24 V ≈	115 V ~	230 V ~
red	843 100 55	843 100 67	843 100 68
green	843 200 55	843 200 67	843 200 68
yellow	843 300 55	843 300 67	843 300 68
clear	843 400 55	843 400 67	843 400 68
blue	843 500 55	843 500 67	843 500 68

NEW

LED Permanent light element ultrabright	24 V ≈
red	843 180 55
green	843 280 55
yellow	843 380 55
clear	843 480 55
blue	843 580 55

Flashing light (Xenon)	24 V = (ASI)	24 V ≈	115 V ~	230 V ~
red	842 110 55	842 100 55	842 100 67	842 100 68
green	842 210 55	842 200 55	842 200 67	842 200 68
yellow	842 310 55	842 300 55	842 300 67	842 300 68
clear	842 410 55	842 400 55	842 400 67	842 400 68
blue	842 510 55	842 500 55	842 500 67	842 500 68

Compare the prices
and advantages of
an LED Flashing light

LED Flashing light element	24 V ≈
red	843 120 55
green	843 220 55
yellow	843 320 55
clear	843 420 55
blue	843 520 55

LED EVS element	24 V ≈
red	843 140 55
green	843 240 55
yellow	843 340 55
clear	843 440 55
blue	843 540 55

LED Blinking light element	24 V ≈	115 V ~	230 V ~
red	843 110 55	843 110 67	843 110 68
green	843 210 55	843 210 67	843 210 68
yellow	843 310 55	843 310 67	843 310 68
clear	843 410 55	843 410 67	843 410 68
blue	843 510 55	843 510 67	843 510 68

LED Rotating light element	24 V ≈
red	843 130 55
green	843 230 55
yellow	843 330 55
clear	843 430 55
blue	843 530 55

Improved
light effect

Further voltages on request.



TECHNICAL DIAGRAMS:

see page 285 onwards



840

Signal Tower KombiSIGN 70

Audible element
844 123 55

Terminal element with cap



Vocal element



GSM transmitter element



ORDER SPECIFICATIONS AUDIBLE ELEMENTS:

Buzzer element 85 dB, 25 mA, IP 54, Continuous or pulse tone	24 V ~ 844 118 55	115 V ~ 844 118 67	230 V ~ 844 118 68
Siren element 105 dB, 150 mA, IP 40 Continuous tone alternating	24 V ~ 844 123 55 no UL / CSA approval		
Multi-functional Siren 100 dB, IP 54, 8 different tones, adjustable sound output	24 V ~ / 80 mA 844 126 55	115 V ~ / 40 mA 844 126 67	230 V ~ / 40 mA 844 126 68
Multi-functional Siren, can be triggered externally 100 dB, 80 mA, IP 65, 7 diff. tones can be triggered externally, adjustable sound output, number of tones depending on the number of optical elements.	24 V ~ 844 126 95		
NEW Siren element with self-adjusting sound output Technical specifications see page 51. Available: 1st Quarter 2011.	24 V ~ 844 810 55		



ORDER SPECIFICATIONS TERMINAL ELEMENTS :

Terminal element for tube mounting incl. cap	840 080 00
Terminal element for bracket or base mounting incl. cap und rubber seal	840 085 00
Terminal element with USB Interface (for tube mounting) Technical specifications see page 51.	840 580 00



ORDER SPECIFICATIONS KOMBI SIGN-HIGHLIGHTS:

NEW WIN system for KombiSIGN 70 Technical specifications see page 43.	860 840 01	
NEW WIN slave for KombiSIGN 70 Technical specifications see page 43.	860 840 02	
NEW KombiSIGN 70 reflect Technical specifications see page 44.	861 840 01	
GSM Transmitter Element for KombiSIGN 70 Technical specifications see page 45.	24 V ~ 840 700 55	
Vocal Element for KombiSIGN 70 Technical specifications see page 49.	24 V ~ 844 840 55	
AS-Interface Element for KombiSIGN 70	Standard Slave 24 V ~ 840 830 55	A/B-Slave 24 V ~ 840 810 55
Technical specifications see page 46.		

Accessories for Signal Tower KombiSIGN 70



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
Foldaway Base incl. rubber seals, suitable for tube, Ø 25 mm, all anodized aluminium (Technical specifications see page 53)	960 000 30
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
Adaptor for tube mounting, Ø 25 mm / 1/2" NPT thread	975 840 02
Adaptor 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 292 onwards



Accessories for Signal Tower KombiS/IGN 70



ORDER SPECIFICATIONS ACCESSORIES:

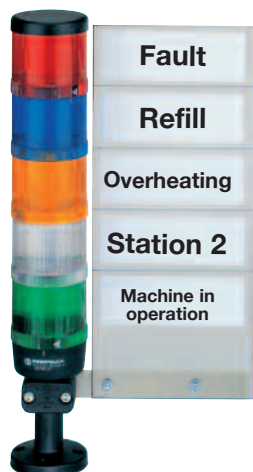
Bulb BA15d, total length max. 42 mm
(for permanent light 641)

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 BA15d, total length max. 42 mm
(for permanent light 840)

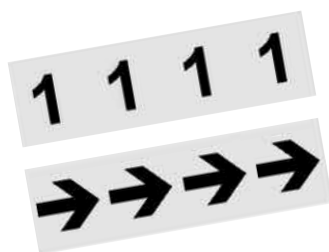
Voltage	24 V ~	115 V ~	230 V ~
Current consumption	< 45 mA	< 15 mA	< 15 mA
red	956 100 75	956 100 67	956 100 68
green	956 200 75	956 200 67	956 200 68
yellow	956 300 75	956 300 67	956 300 68
white	956 400 75	956 400 67	956 400 68
blue	956 500 75	956 500 67	956 500 68



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, not for use in Flashing Light, LED EVS, LED Flashing Light and LED Permanent Light Element ultrabright.

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 KombiS/IGN Signal Towers on pages 60 and 61.



TECHNICAL DIAGRAMS:

see page 290 + 291

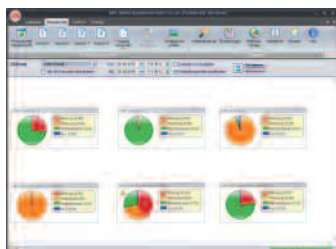
NEW



"WIN system" is immediately ready for use: Fit the slaves in the existing signal towers and connect the master to the PC



With the supplied software, users can wirelessly monitor their machinery via PC



The software enables users to analyse productivity and increase the efficiency of their machines



The software displays the status of the signal towers integrated into the wireless network

- Economical wireless-based Machine Data Collection system (MDC system)
- Central monitoring of a wide range of different machines via PC
- Relevant machine information at a glance
- Reduction of reaction times, repair and maintenance requirements and costs
- No additional wiring as existing WERMA signal towers can be used
- Downtime analysis



TECHNICAL SPECIFICATIONS:

Patent pending

WIN slave

Dimensions (Ø x Height):	70 mm x 65.5 mm
Housing:	PC, black
Connection:	Bayonet
Operating voltage:	24 V ≈
Current consumption:	40 mA

WIN master

Dimensions (L x H x W):	76 mm x 30 mm x 80 mm (without antenna)
Housing:	ABS, black
Connection:	Via USB
Operating voltage:	Via USB
Current consumption:	< 100 mA
Suitable for:	Windows 2000, Windows XP, Windows Vista, Windows 7

Wireless connection

ISM frequency:	868 MHz (WIN conforms to the EU's EN 300220 harmonised standard and can thus be used in all EU member countries. Further countries upon request.)
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Transmission range:	Up to 300 m (unobstructed line of sight) Every slave simultaneously functions as a "repeater", enabling the transmission range to be significantly increased.
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ORDER SPECIFICATIONS:

WIN system for KombiSIGN 70	860 840 01
Assembly: WIN master, 3 WIN slaves KombiSIGN 70 (pre-configured), Software	

WIN slave for KombiSIGN 70	860 840 02
To expand WIN system. The network can be expanded to up to 50 WIN slaves.	



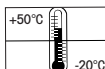
ADDITIONAL INFORMATION:

* WIN = Wireless Information Network
Further information can be found in the chapter „Tech-Talk“ beginning on page 320.



TECHNICAL DIAGRAMS:

see page 288



PLC



861

KombiSIGN reflect for KombiSIGN 70

NEW

The slave sends the status directly to the master, and reflects the status of the signal tower installed on the machine



Remote transmission via wireless signal with a maximum range of up to 300 m (unobstructed line of sight)



Simply fit the KombiSIGN reflect slave to the signal tower on the machine

- Simple monitoring of signal towers out of view
- Signal tower "reflection" to a central location
- Shortening of reaction times and reduction of costs
- KombiSIGN reflect is integrated into existing WERMA signal towers
- No additional wiring costs
- Simple commissioning due to pre-configured modules

i TECHNICAL SPECIFICATIONS:

Slave

Dimensions (Ø x Height):	70 mm x 65.5 mm
Housing:	PC, black
Connection:	Bayonet
Operating voltage:	24 V ~
Current consumption:	40 mA

Master

Dimensions (Ø x Height):	70 mm x 65.5 mm (without antenna)
Housing:	PC, black
Connection:	Bayonet
Operating voltage:	24 V ~
Current consumption:	40-90 mA

Wireless connection

ISM frequency:	868 MHz (KombiSIGN reflect conforms to the EU's EN 300220 harmonised standard and can thus be used in all EU member countries. Further countries upon request.)
Transmission range:	Up to 300 m (unobstructed line of sight)

ORDER SPECIFICATIONS:

KombiSIGN 70 reflect	861 840 01
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ADDITIONAL INFORMATION:

Signal tower "reflection"

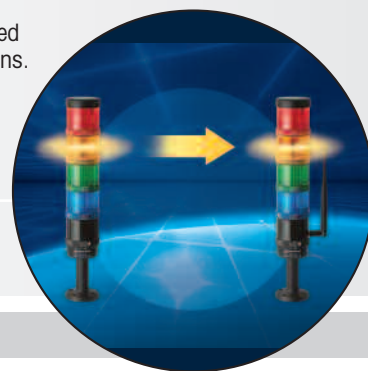
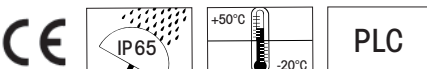
WERMA Signaltechnik provides a simple solution for the remote wireless monitoring of machinery. The new "KombiSIGN reflect" kit can be integrated into existing signal towers which are already installed on your machines. KombiSIGN reflect "reflects" the status of the machine to a signal tower within your line of sight.

This enables you to wirelessly monitor machines situated at a greater distance and respond quickly to malfunctions. With KombiSIGN reflect, even machines which were not previously network-capable can now be remotely monitored.

Further information can be found in the chapter "Tech-Talk" on page 324.

TECHNICAL DIAGRAMS:

see page 289



Simple monitoring of signal towers out of view

Patent
approved



Also suitable for
US frequencies

- 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 needed
- Also suitable for US frequencies (Quadband)



TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 65.5 mm (without antenna)
Housing:	PC
Current consumption:	50 mA
Max. current draw (momentary):	450 mA
GSM frequency:	850, 900, 1800/1900 MHz
Plug-in slot for SIM card:	Integrated (SIM card is not included in assembly)
Antenna connection:	FME plug connector (bracket antenna included)



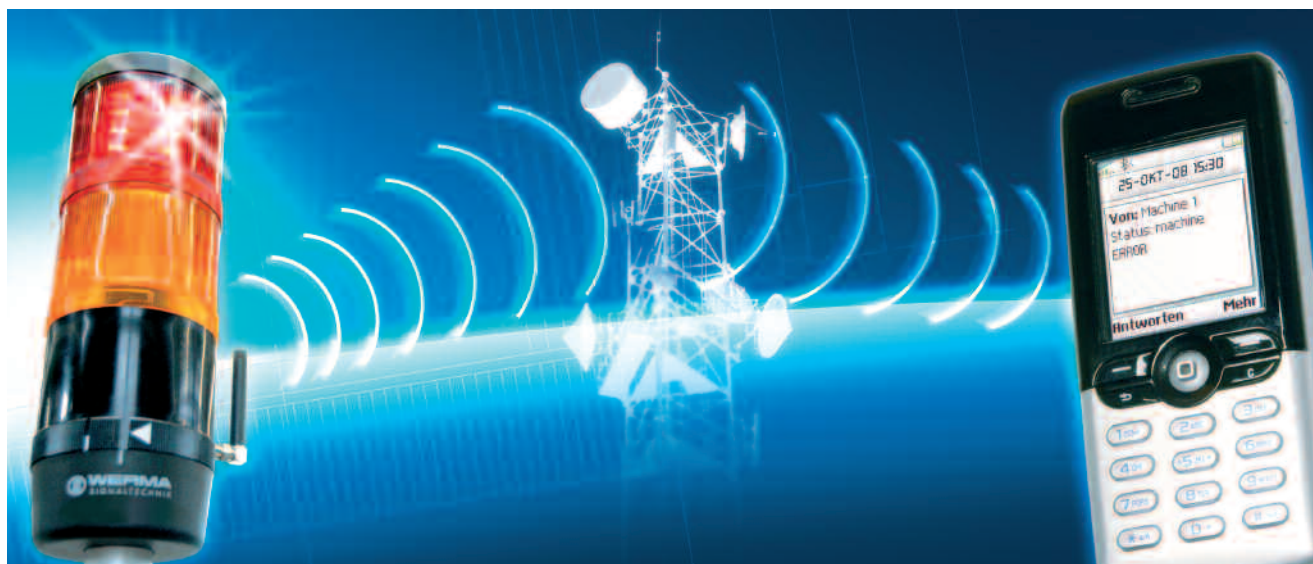
ORDER SPECIFICATIONS:

GSM Transmitter Element	24 V =
	840 700 55

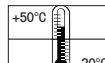
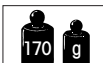


TECHNICAL DIAGRAMS:

see page 285



Class 2



840

AS-Interface Element for KombiS/GN 70



Cable not included in assembly

LEDs displays the
current status

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



TECHNICAL SPECIFICATIONS:

	Standard Slave	A/B-Slave
Number of addresses:	Max. 31	Max. 62
Number of signal elements:	Max. 4	Max. 3
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 - 24 V	24 V +/- 10%
Short circuit/overload protection:	Integrated	Pre-fuse M 1.6 A



ORDER SPECIFICATIONS:

AS-Interface Element	Standard Slave	A/B-Slave
	840 830 55	840 810 55



ADDITIONAL INFORMATION:



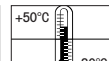
The KombiS/GN Signal Towers 70 and 71 with AS-Interface Element are capable of total communication: Through simple integration of an AS-Interface Element the actuators are connected to the networking system Actuator-Sensor-Interface – this considerably reduces complex wiring. The necessary power supply (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 page 319).



TECHNICAL DIAGRAMS:

see page 285

Class 2



LED Permanent Light Element ultrabright for KombiSIGN 70



- Up to 20 times brighter than conventional LED elements
- Extremely good visibility – even in direct sunlight
- Life duration up to 50,000 hrs
- Maximum brightness via intelligent LED control
- Low current consumption and maintenance-free
- Shock-proof and vibration-resistant



TECHNICAL SPECIFICATIONS:

Life duration
up to 50,000 hrs

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
Current consumption:	Max. 190 mA



ORDER SPECIFICATIONS:

LED Permanent light element ultrabright 24 V =	
red	843 180 55
green	843 280 55
yellow	843 380 55
clear	843 480 55
blue	843 580 55



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.

Furthermore, the intelligent electronics ensure that the LEDs operate at maximum brightness, depending on the ambient and operating temperatures. The "ultrabright" LED element is therefore always working at its optimum, and the energy-saving LED technology ensures that power consumption is kept to a minimum.

Further information can be found in the chapter "Tech-Talk" beginning on page 325.



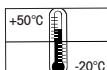
TECHNICAL DIAGRAMS:

see page 285



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

Maximum brightness via
intelligent LED control





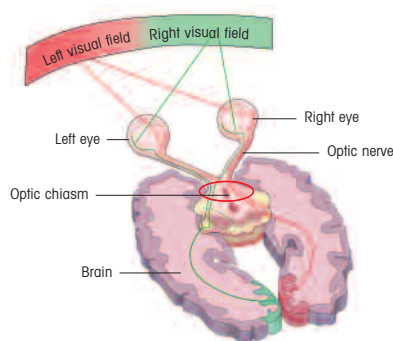
843

LED EVS* Element for KombiSIGN 70

Patent pending



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



TECHNICAL SPECIFICATIONS:

Life duration
up to 50,000 hrs

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
Current consumption:	red / yellow: 200 mA green / blue / clear: 150 mA



ORDER SPECIFICATIONS:

Voltage	24 V $\overline{\text{---}}$
red	843 140 55
green	843 240 55
yellow	843 340 55
clear	843 440 55
blue	843 540 55



ADDITIONAL INFORMATION:



* EVS = Enhanced Visibility System or Enhanced Visibility System
Further information can be found in the chapter "Tech-Talk" on page 326.

EVS – Attention-grabbing light effect on neurobiological basis

The flickering of neon lamps and comparable light 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.

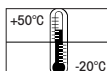
EVS – Flickering light without acclimatisation effect

On the basis of this understanding, WERMA's R+D department set out to find a flickering light with a high degree of effectivity 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.



TECHNICAL DIAGRAMS:

see page 285



PLC



German utility
model approved



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



Individual messages 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 (sounds, alarms, music or spoken text)
- 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 (Ø x Height):	70 mm x 111 mm
Housing:	PC
Current consumption:	400 mA
Integrated memory:	Approx. 60 min. of replay capacity
Number of sequences recordable:	15, depending on the number of signal elements
Number of additionally signal elements:	Max. 3
Programming:	Via USB connection cable from PC
Sound output:	Adjustable, max. 85 dB
Assembly includes USB connection cable.	

mp3 compatible



ORDER SPECIFICATIONS:

Vocal element	24 V ~
	844 840 55



ACCESSORIES:

Headset with microphone	960 645 01
-------------------------	------------



TECHNICAL DIAGRAMS:

see page 286

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



Plays customer-specific audio files
in mp3 format
(sounds, alarms, music or spoken text)

Easy programming via USB interface

Excellent sound quality

Up to 60 minutes replay capacity

Adjustable sound output

WERMA
SIGNALTECHNIK





844

Siren Element with self-adjusting sound output for KombiS/GN 70

NEW



- Automatic sound output adjustment between 80 and 100 dB
- Sound output is c. 5 dB louder than the background noise level
- Continual measurement of the ambient noise level
- Ideal for applications with changing ambient sound levels



TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 111 mm
Housing:	PC
Tone type:	Pulse tone
Tone frequency:	2.5 KHz
Sound output:	80 dB - max. 100 dB

**Loud enough
yet
not disturbing!**



ORDER SPECIFICATIONS:

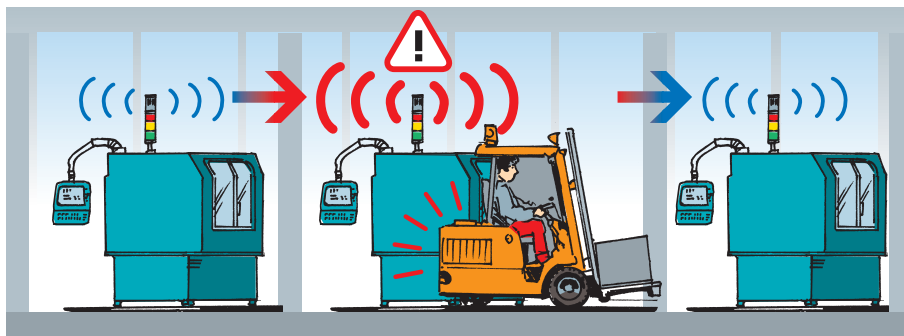
Voltage:	24 V $\equiv$
Current consumption:	< 150 mA
	844 810 55



ADDITIONAL INFORMATION:

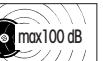
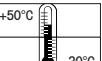
The siren element adjusts its sound output through continual measurement of the ambient noise level. The emitted tone is c. 5 dB louder than the background noise level. The warning signal can always be heard without being irritatingly loud for people in the sounder's vicinity.

**Patent
approved**



TECHNICAL DIAGRAMS:

see page 286





- Automatic sound output adjustment between 80 and 100 dB
- Sound output is c. 5 dB louder than the background noise level
- Continual measurement of the ambient noise level
- Ideal for applications with changing ambient sound levels



TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 30.5 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:

Terminal element USB	24 V =
	840 580 00



ACCESSORIES:

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

Direct triggering via USB Interface

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.

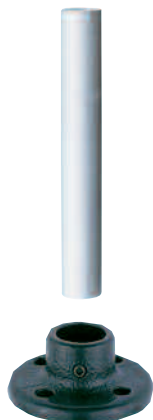
This innovation in the field of signal towers is controlled directly from the PC and can therefore be put into operation easily and in an uncomplicated manner. Neither a separate power supply nor additional hardware is required because the terminal element with USB interface is based on a standard USB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



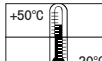
TECHNICAL DIAGRAMS:

see page 285

Direct triggering of the signal tower via USB Interface



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





840

KombiSIGN 70 in customer-specific coloured coatings



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



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
Minimum order quantity:	10 pieces
Delivery time:	By arrangement
Colour Finish:	Matt or gloss

Please state the required RAL number



ORDER SPECIFICATIONS TERMINAL ELEMENTS:

	Screw terminal
Terminal element for tube mounting, coated, including cap	840 780 00
Terminal element for Bracket- or base mounting, coated including cap and seal	840 785 00



ACCESSORIES:

Base with integrated tube, coated Ø 25 mm, 110 mm long, plastic, incl. rubber seals	960 000 24
Bracket for 1-sided mounting, coated, incl. rubber seals	960 000 22



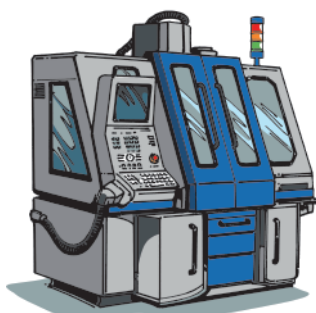
ADDITIONAL INFORMATION:

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



TECHNICAL DIAGRAMMS:

see page 285



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



The KombiSIGN Signal Towers 70 can be coated in any colour within the RAL spectrum

German utility
model approved



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

TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 117 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 70 **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 41

Cable gland M 16 x 1.5 mm **960 000 04**

QUICK AND SIMPLE MOUNTING:

- 
Place the lower part of the Foldaway Base in the desired position
- 
Attach the upper part directly onto the signal tower tube. Insert the connection cable
- 
Place the upper and lower parts together at the desired angle
- 
Place the upper and lower parts together at the desired angle

TECHNICAL DIAGRAMS:

see page 293

