



WERMA
S I G N A L T E C H N I K

KombiSIGN 50, 70 and 71
Signals for combining
- at the twist of a hand



KombiSIGN 71



KombiSIGN 50



KombiSIGN 70

Accessories for Signal Tower KombiSIGN 71



NEW



ORDER SPECIFICATIONS:

Bulb BA 15 d,
Total length max. 42 mm

12 V, 5 Watt **955 840 34**

24 V, 5 Watt **955 840 35**

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

Info transparencies available:

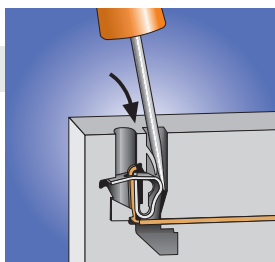
neutral	975 840 49	number `5`	975 840 55
number `0`	975 840 50	number `6`	975 840 56
number `1`	975 840 51	number `7`	975 840 57
number `2`	975 840 52	number `8`	975 840 58
number `3`	975 840 53	number `9`	975 840 59

TECHNICAL DIAGRAMS

see pages 26 + 27

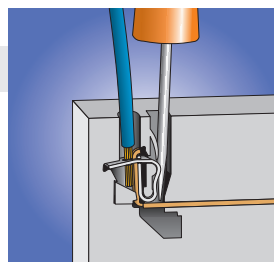
CAGE CLAMP®

1



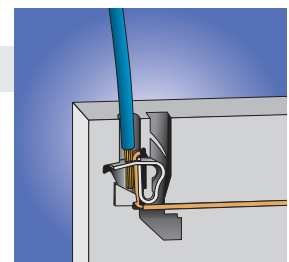
Insert screwdriver into opening as far as possible.

2



Open spring-loaded clamp with help of the screwdriver.

3



Remove screwdriver – the conductor is firmly clamped.



Base with tube (accessory)



Bracket (accessory)



Tube mounting with Alu-tube

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

TECHNICAL SPECIFICATIONS:

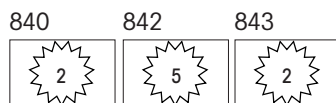
Dimensions (Diameter x Height):	Terminal element: 70 mm x 30 mm Light element: 70 mm x 65 mm Audible element: 70 mm x 72 mm
Housing and accessories:	Polyamide, high impact, black
Dome:	Polycarbonate, transparent
Fixing:	Base mounting Tube mounting, for tube ø 25 mm Bracket mounting
Socket:	Bayonet, B 15 d, for bulb max. 7 W
Connection:	Screw M3 in terminal element Contact protection according to VDE
Element seal:	Standard 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 / max. 10 elements with 2-sided bracket
Permanent light element	12 - 240 V Bulbs not included in assembly
Blinking light element	24 V ≅ 115 V ≅ 230 V ≅
Flashing light element	12 V = 24 V = 115 V ~ 230 V ~
Current consumption:	195 mA 125 mA 20 mA 15 mA
reduced for AS-Interface:	80 mA
LED-Permanent light element	24 V ≅ 115 V ~ 230 V ~
Current consumption:	45 mA 25 mA 25 mA
Starting current:	< 0,5 A
LED-Blinking light element	24 V ≅
Current consumption:	40 mA
Starting current:	< 0,5 A
LED-Rotating light element	24 V ≅
Current consumption:	70 mA
Starting current:	< 0,5 A

TECHNICAL DIAGRAMS

see page 25

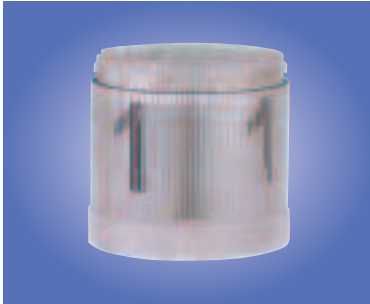
ACCESSORIES

see pages 26 + 27





Permanent / Blinking / Flashing light element

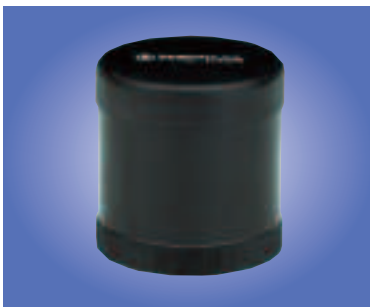


Permanent light, clear with info

Life duration up to 100.000 h



LED element



Audible element



Terminal element with cap

ORDER SPECIFICATIONS OPTICAL ELEMENTS:

Permanent light element	12-240 V	Flashing light el. 24 V = (ASI)		
red	840 100 00	842 110 55	842 210 55	
green	840 200 00	842 310 55	842 410 55	
yellow	840 300 00	842 510 55		
clear	840 400 00			
blue	840 500 00			
Blinking light element	24 V ≐	115 V ≐	230 V ≐	
red	841 100 55	841 100 67	841 100 68	
green	841 200 55	841 200 67	841 200 68	
yellow	841 300 55	841 300 67	841 300 68	
clear	841 400 55	841 400 67	841 400 68	
blue	841 500 55	841 500 67	841 500 68	
Flashing light element	12 V =	24 V =	115 V ~	230 V ~
red	842 100 54	842 100 55	842 100 67	842 100 68
green	842 200 54	842 200 55	842 200 67	842 200 68
yellow	842 300 54	842 300 55	842 300 67	842 300 68
clear	842 400 54	842 400 55	842 400 67	842 400 68
blue	842 500 54	842 500 55	842 500 67	842 500 68
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	
LED-Blinking light element	24 V ≐			
red	843 110 55			
green	843 210 55			
yellow	843 310 55			
clear	843 410 55			
blue	843 510 55			
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			

ORDER SPECIFICATIONS AUDIBLE ELEMENTS:

Buzzer element	24 V ≐	115 V ≐	230 V ~
85 dB, 25 mA, IP 54, continuous or pulsating tone	844 118 55	844 118 67	844 118 68
Siren element	24 V =		
105 dB, 100 mA, IP 40 continuous tone alternating	844 123 55		
Multi-functional Siren	24 V ≐ / 80 mA	115 V ~ / 40 mA	230 V ~ / 40 mA
100 dB, IP 54, 8 different tones, volume adjustable	844 126 55	844 126 67	844 126 68
Multi-functional Siren, with remote control	24 V =		
100 dB, 80 mA, IP 54, 7 different tones can be triggered remotely, volume adjustable	844 126 95		
Vocal element	24 V ≐		
	844 900 55		

ORDER SPECIFICATIONS TERMINAL ELEMENTS:

Terminal element for tube mounting including cap	840 080 00
Terminal element for bracket or base mounting, including cap and seal	840 085 00

ORDER SPECIFICATIONS:	
	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 base mounting, with cable gland 960 000 01
	Bracket for surface mounting, with cable gland 960 000 02
	Bracket for 1-sided mounting incl. rubber seal 975 840 85
	Bracket for 2-sided mounting incl. rubber seal 975 840 86
	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
	800 mm long 975 840 80
	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 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" screw 975 840 02
	Cable gland for surface mounting M 16 x 1,5 960 000 04



ORDER SPECIFICATIONS:

Bulb BA 15 d,
Total length max. 42 mm

12 V, 5 Watt	955 840 34
24 V, 5 Watt	955 840 35
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

Info transparencies available:

neutral	975 840 49
number `0`	975 840 50
number `1`	975 840 51
number `2`	975 840 52
number `3`	975 840 53
number `4`	975 840 54
number `5`	975 840 55
number `6`	975 840 56
number `7`	975 840 57
number `8`	975 840 58
number `9`	975 840 59

ORDER SPECIFICATIONS VOCAL ELEMENT:

	24 V ≐
Vocal element	844 900 55
Recording station for vocal element, with microphone, 115 V ~	844 901 67
Recording station, 230 V ~ (available on loan, please enquire)	844 901 68

TECHNICAL DIAGRAMS

see pages 26 + 27



Base with tube (accessory)



Bracket (accessory)



Base mounting

- Signal tower system 50 mm \varnothing modular construction
- 360° visibility
- Choice of optical and audible elements
- Order of optical elements interchangeable as required
- Tool-free changing of elements and bulbs

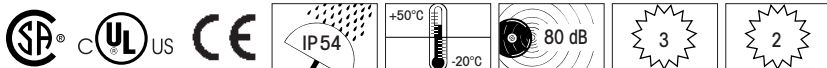
TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	Terminal element: 52 mm x 16 mm
	Light element: 52 mm x 65 mm
	Audible element: 52 mm x 72 mm
Housing and accessories:	Polyamide, high impact, black
Dome:	Polycarbonate, transparent
Fixing:	Base mounting
	Tube mounting, for tube \varnothing 25 mm
	Single hole mounting
	Bracket mounting
Socket:	Bayonet, B 15 d, for bulb max. 5 W
Connection:	Screwable connection M3,
	max. 2,5 mm ²
	Contact protection according to VDE
Protection rating:	Light elements: IP 54
	Audible elements: IP 54
Number of modules possible:	max. 4

Permanent light element	12 - 240 V \cong		
Bulbs not included in assembly			
Blinking light element	24 V \cong	115 V \cong	230 V \cong
LED-Permanent light element	24 V \cong	115 V \sim	230 V \sim
Current consumption:	45 mA	25 mA	25 mA
Starting current:	< 0,5 A at 24 V		

TECHNICAL DIAGRAMS

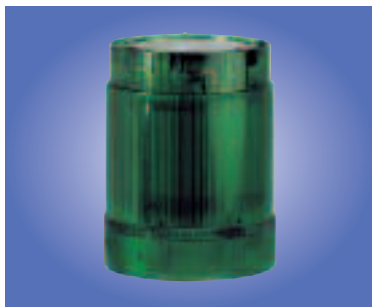
see page 25



846 848



Permanent light element



Blinking light element

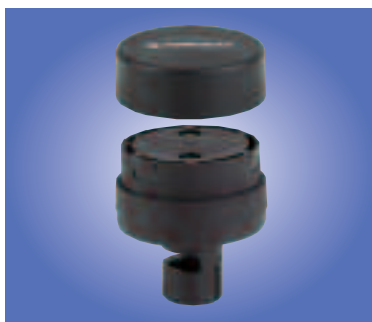
Life duration
up to 100.000 h



LED element



Audible element

Terminal element
with cap

ORDER SPECIFICATIONS OPTICAL ELEMENTS:

Permanent light element	12-240 V \cong		
red	846 100 00		
green	846 200 00		
yellow	846 300 00		
clear	846 400 00		
blue	846 500 00		
Blinking light element	24 V \cong	115 V \cong	230 V \cong
red	847 100 55	847 100 67	847 100 68
green	847 200 55	847 200 67	847 200 68
yellow	847 300 55	847 300 67	847 300 68
clear	847 400 55	847 400 67	847 400 68
blue	847 500 55	847 500 67	847 500 68
LED-Permanent light element	24 V \cong	115 V \sim	230 V \sim
red	848 100 55	848 100 67	848 100 68
green	848 200 55	848 200 67	848 200 68
yellow	848 300 55	848 300 67	848 300 68
clear	848 400 55	848 400 67	848 400 68
blue	848 500 55	848 500 67	848 500 68

ORDER SPECIFICATIONS AUDIBLE ELEMENTS:

Buzzer element	24 V \cong	115 V \sim	230 V \sim
80 dB, 24 V \cong , max. 25 mA, IP 54, continuous or pulsating tone, adjustable	849 000 75	849 000 77	849 000 68

ORDER SPECIFICATIONS TERMINAL ELEMENT:

Terminal element	845 000 00
for base mounting, tube mounting, single hole and bracket mounting, including cap	

ACCESSORIES

see page 26 + 27



ORDER SPECIFICATIONS:

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 surface mounting, with cable gland **960 000 01**

Bracket for tube mounting **975 845 02**

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**

800 mm long **975 840 80**

Base for tube mounting \varnothing 25 mm, plastic incl. rubber seal **975 840 90**

Base for tube mounting \varnothing 25 mm, metal incl. rubber seal **975 840 91**

Base for surface mounting **975 845 01**

Adapter for single hole mounting incl. rubber seal **975 845 03**

Bulb BA 15 d, Total length max. 42 mm

12 V, 5 Watt **955 840 34**

24 V, 5 Watt **955 840 35**

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 \cong	115 V \sim	230 V \sim
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

TECHNICAL DIAGRAMS

see pages 26 + 27

Signal Tower with AS-Interface Element



Signal towers KombiSIGN 50, 70 and 71 with AS-interface element are capable of total communication: By simple integration of an AS-interface element the actuators are connected to the networking system actuator-sensor-interface - this considerably reduces complex wiring. This element is to be mounted as the lowermost element in the signal tower just like a light element.

TECHNICAL SPECIFICATIONS:

	AS-Interface Element ¹⁾	AS-Interface Element with additional external voltage ^{1) 2)}
Number of signal elements	max. 4	max. 4
Type of signal elements	Flashing light elements LED elements Buzzer elements Siren elements (the total consumption of the single elements must not exceed 200 mA)	Permanent light elements Flashing light elements ¹⁾ LED elements Buzzer elements Siren elements ¹⁾
IO-Code	8	8
ID-Code	F	F
Power supply	through bus conduction	through bus conduction
Operating voltage	18,5 V ... 31,6 V	18,5 V ... 31,6 V
Current consumption	210 mA	75 mA ¹⁾ / 50 mA ²⁾
Reverse battery protection	integrated	integrated
Watchdog	integrated	integrated
Terminals	4, electronic	4, relays
On-load voltage	through bus conduction	additional external voltage: 10 V... 120 V= ¹⁾ 10 V... 30 V = ²⁾ 10 V... 230 V ~
Current carrying cap. ΣI_{max}	200 mA	1,5 A
Short current-/overload pro.	integrated	fuse M 1,6 A

¹⁾ valid for KombiSIGN 70 and 71 / ²⁾ valid for KombiSIGN 50

ORDER SPECIFICATIONS AS-INTERFACE ELEMENTS KOMBISIGN 70 + 71:

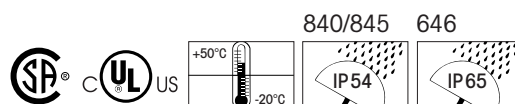
	KombiSIGN 70	KombiSIGN 71
AS-Interface Element	840 800 55	646 800 55
AS-Interface Element with add. external voltage	840 800 68	646 800 68

ORDER SPECIFICATIONS AS-INTERFACE ELEMENT KOMBISIGN 50:

AS-Interface Element with add. external voltage	845 800 68
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TECHNICAL DIAGRAMS

see pages 24 + 25 + 26



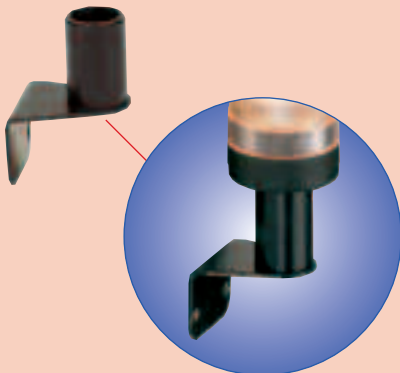
Summary of KombiSIGN Accessories

KombiSIGN 50

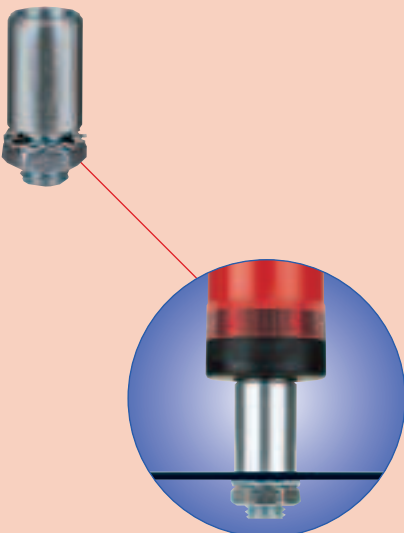
Order no.
975 845 01 Base for surface mounting and tube mounting



Order no.
975 845 02 Bracket for tube mounting

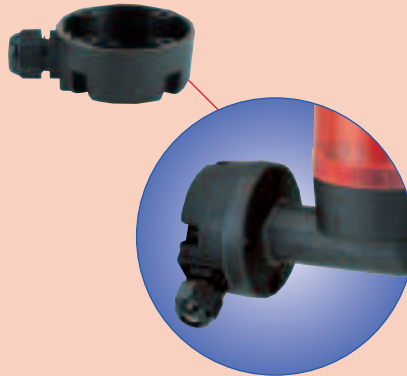


Order no.
975 845 03 Adapter for single hole mounting

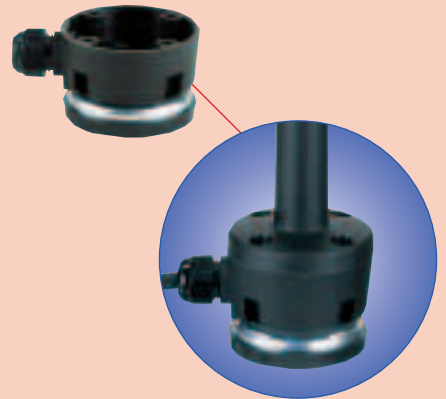


KombiSIGN 50, 70 and 71

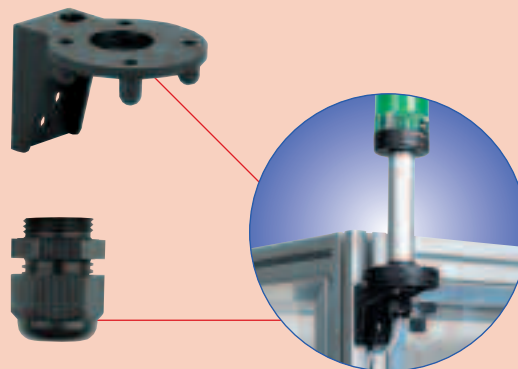
Order no.
975 840 01 Contact box for cable exit at side, with mounting material



Order no.
975 840 04 Contact box with magnetic base and cable exit at side



Order no.
960 000 01 Bracket for base mounting, including cable gland M 16 x 1,5



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

Bulb BA 15 d,
Total length max. 42 mm

955 840 34	12 V, 5 Watt
955 840 35	24 V, 5 Watt
955 840 57	115 V, 5 Watt
955 840 38	230 V, 5 Watt



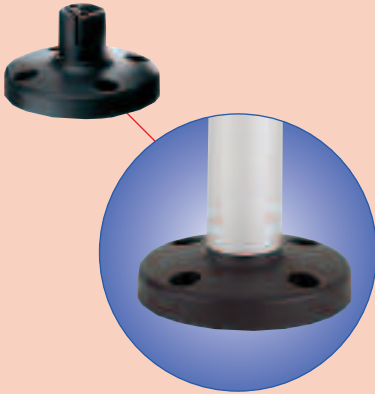
TECHNICAL DIAGRAMS
see pages 26 + 27

Summary of KombiSIGN Accessories

KombiSIGN 70 and 71

Order no.

975 840 90 Base for tube mounting
ø 25 mm, plastic



Order no.

975 840 91 Base for tube
ø 25 mm, metal



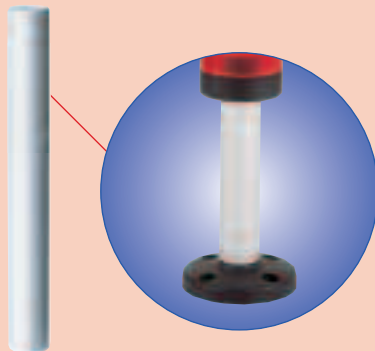
Order no.

975 845 10 Tube ø 25 mm,
all anodized aluminium
100 mm long

975 840 25 250 mm long

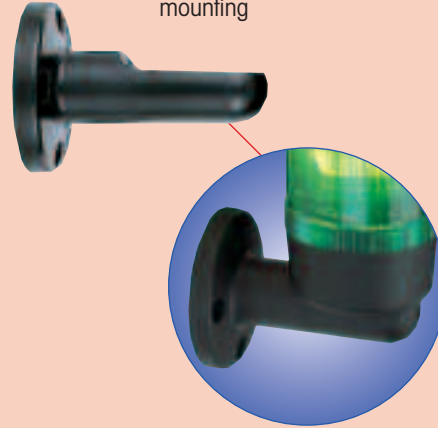
975 840 40 400 mm long

975 840 80 800 mm long



Order no.

975 840 85 Bracket for 1-sided
mounting



Order no.

975 840 10 Base with integrated tube,
ø 25 mm, 110 mm long,
plastic



Order no.

960 000 02 Bracket for surface mounting
including cable gland
M 16 x 1,5



Order no.

Info transparencies:

975 840 49 neutral

975 840 50 number "0"

975 840 51 number "1"

975 840 52 number "2"

975 840 53 number "3"

Order no.

975 840 54 number "4"

975 840 55 number "5"

975 840 56 number "6"

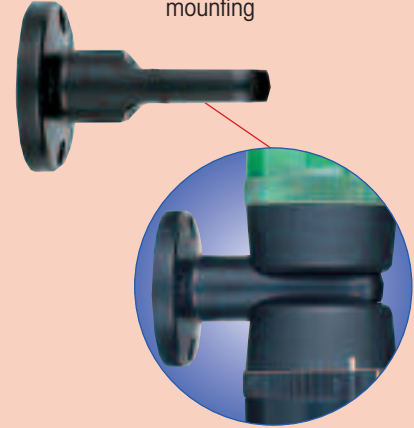
975 840 57 number "7"

975 840 58 number "8"

975 840 59 number "9"

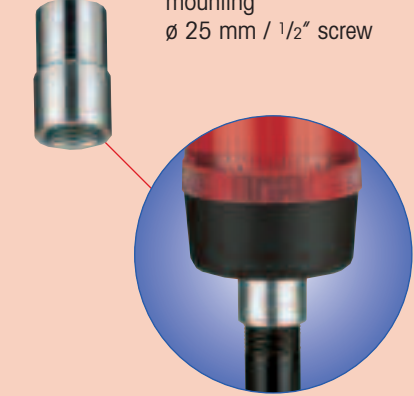
Order no.

975 840 86 Bracket for 2-sided
mounting



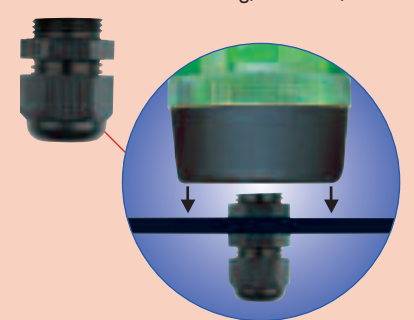
Order no.

975 840 02 Adapter for tube
mounting
ø 25 mm / 1/2" screw



Order no.

960 000 04 Cable gland for surface
mounting, M 16 x 1,5



TECHNICAL DIAGRAMS
see pages 26 + 27

Interface Box for KombiSIGN 50, 70 and 71



- Direct triggering via PC
- Triggering of four independent signal tower modules
- Software included in delivery

TECHNICAL SPECIFICATIONS:

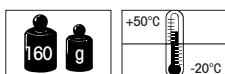
Dimensions of interface box (L x W x H):	120 x 65 x 40 mm
Drive:	up to 4 signal elements 24 V via PC
Interface:	Serial RS 232
Connection:	COM with Sub-D 9-pin
Assembly:	Interface Box Network appliance 24 V Software: Driver for Labview
Working temperature:	- 20°C bis + 50°C

ORDER SPECIFICATIONS:

Interface Box	960 000 06
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TECHNICAL DIAGRAMS

see page 116



Indication Board for KombiSIGN 50, 70 and 71



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

TECHNICAL SPECIFICATIONS:

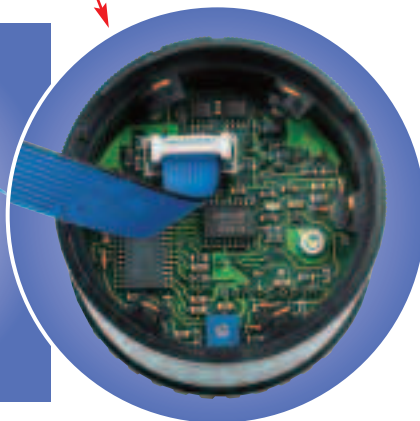
Dimensions of indication board (W x H):	153 x 345 mm
Surface area per section (W x H):	ca. 140 x 50 mm
Material:	PMMA
Assembly:	Indication board (5 sections) including mounting material
Mounting:	Fixing only possible on 25 mm diameter tube

ORDER SPECIFICATIONS:

Indication Board	960 000 05
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TECHNICAL DIAGRAMS

see page 26



A vocal element is also available as a further audible signal element. Up to 15 different messages can be recorded and recalled. Volume can be adjusted using a potentiometer within a range at 0 - 88 dB. A distribution voltage of 24 V = is necessary. Total recording time available is 60 seconds. The drive of the individual messages uses 24 V =, 4 Bit parallel.

Up to 3 optical signal elements can be integrated in addition to the vocal element in any one signal tower. The number of messages is then limited to one. The recording of messages is carried out using a separate recording station.

TECHNICAL SPECIFICATIONS:

Dimensions (Diameter x Height):	70 x 69 mm
Housing:	Polyamide, high impact, black
Protection rating:	IP 53
Operating voltage:	24 V = (15 - 30 V =)
Current consumption:	≤ 350 mA
Volume:	0 - 88 dB (1m) adjustable
Number of texts:	max. 15
Total recording time:	60 seconds
Drive:	4 Bit parallel
Driving voltage:	+ 24 V

ORDER SPECIFICATIONS VOCAL ELEMENT:

	24 V =
Vocal element	844 900 55
Recording station for vocal element, with microphone, 115 V ~	844 901 67
Recording station, 230 V ~ (available on loan, please enquire)	844 901 68

TECHNICAL DIAGRAMS

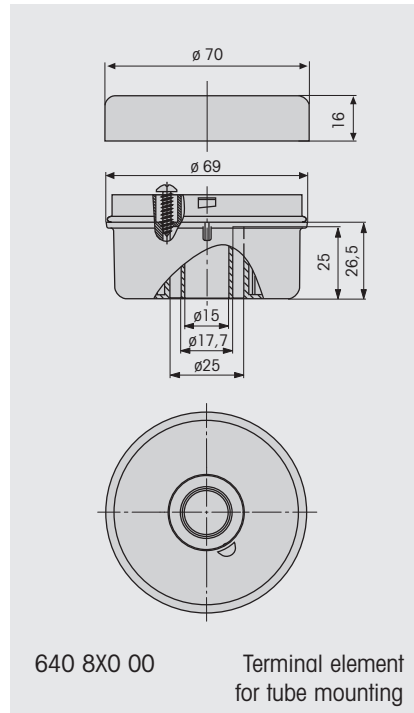
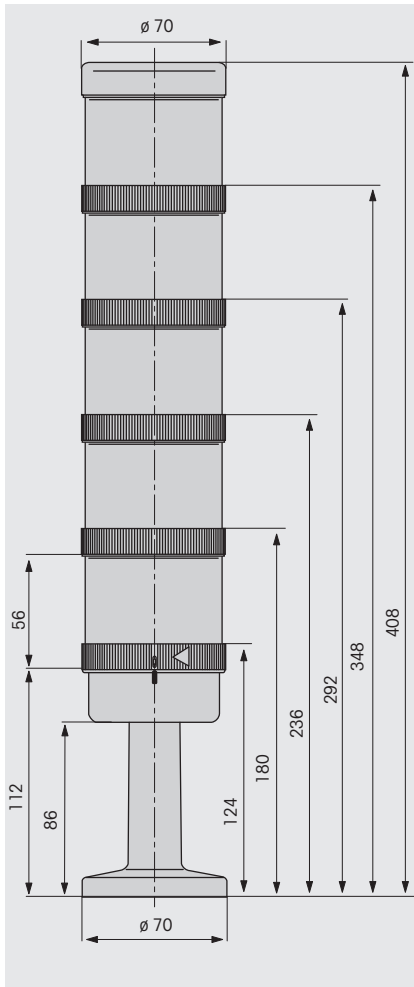
see page 25

Technical Diagrams

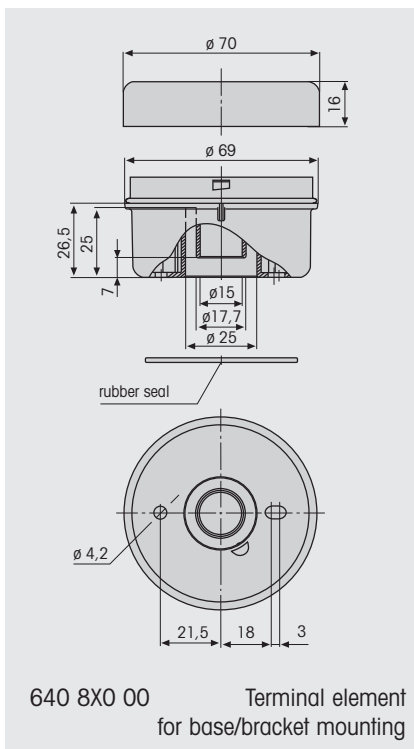
640

KombiSIGN 71

640



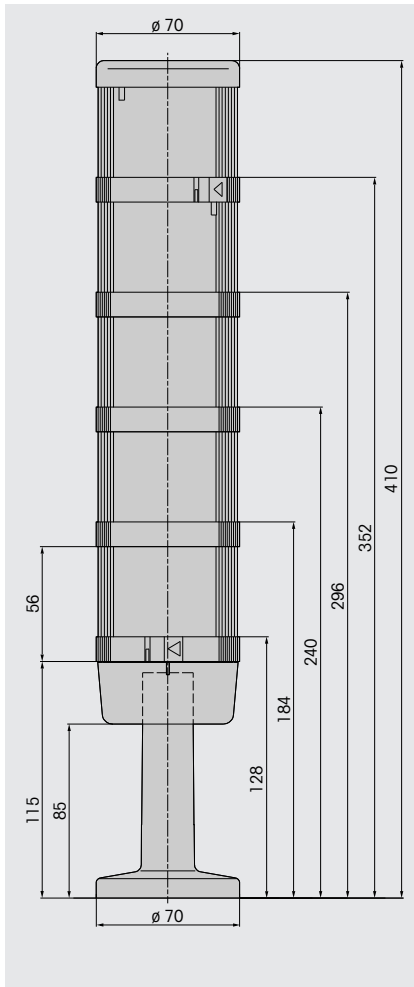
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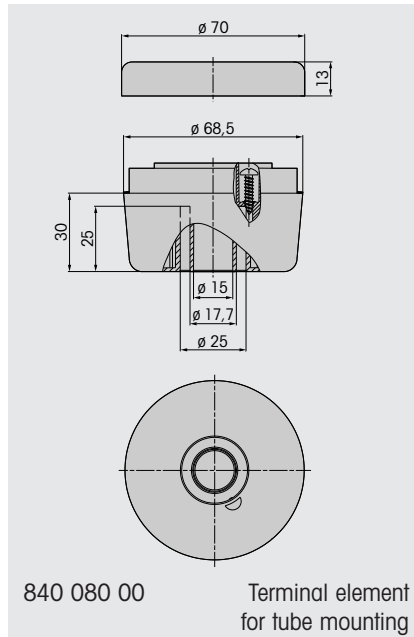
Technical Diagrams

840

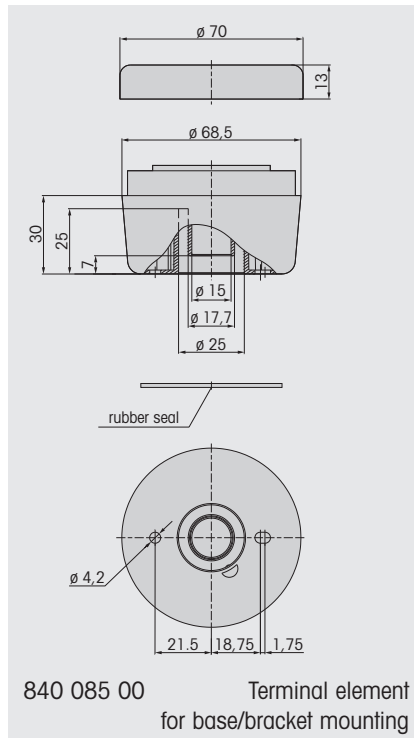
KombiSIGN 70



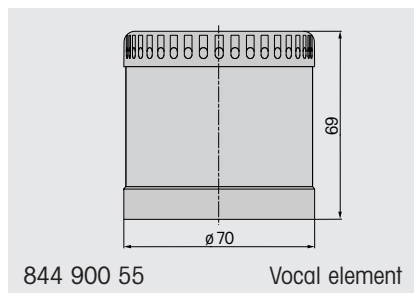
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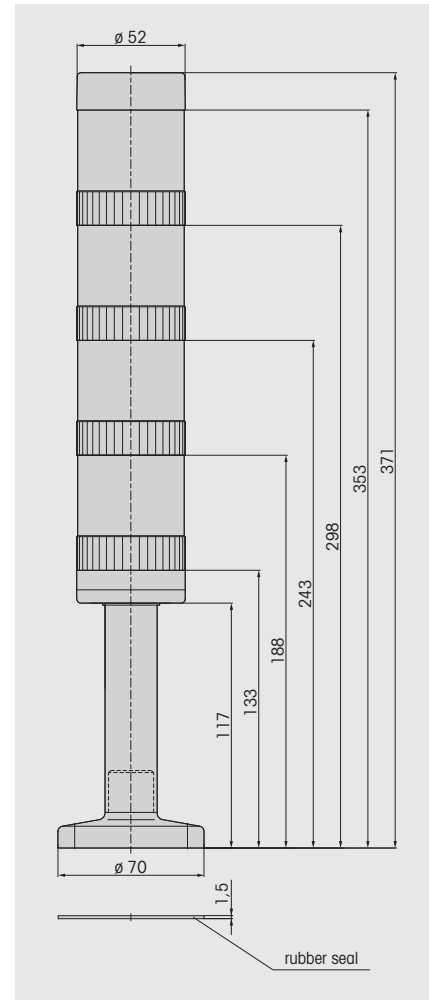


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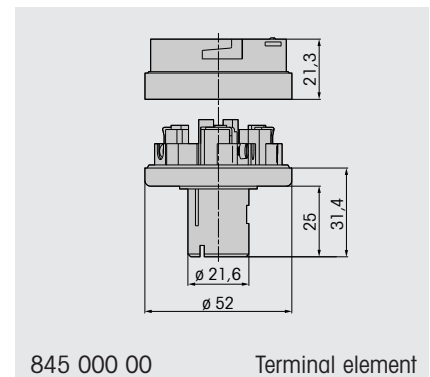


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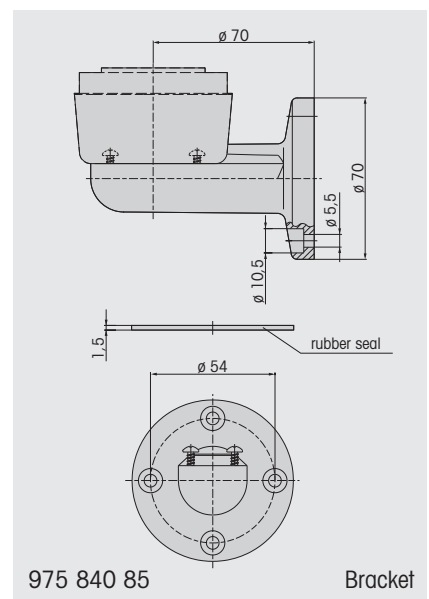
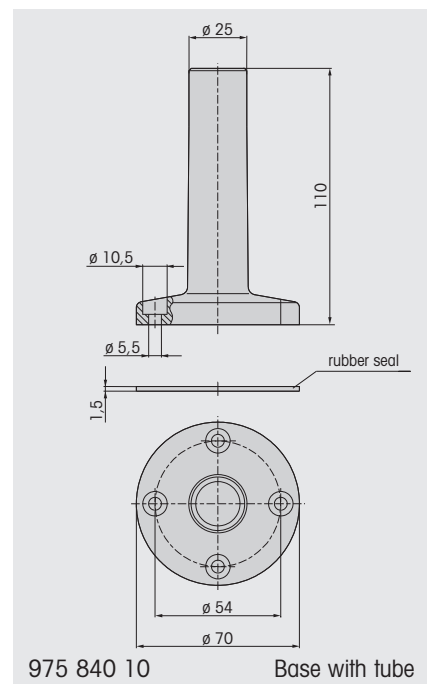
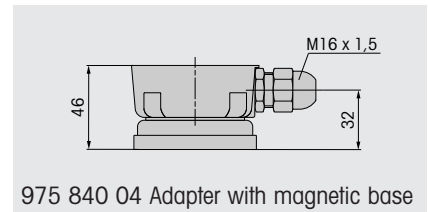
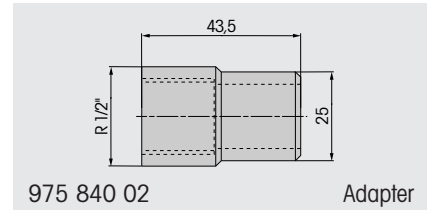
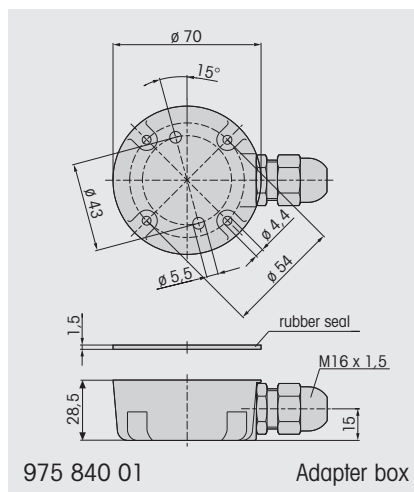
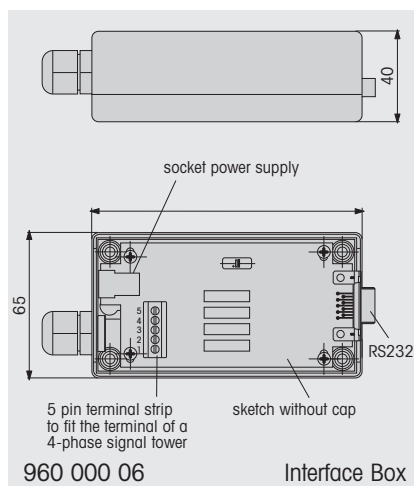
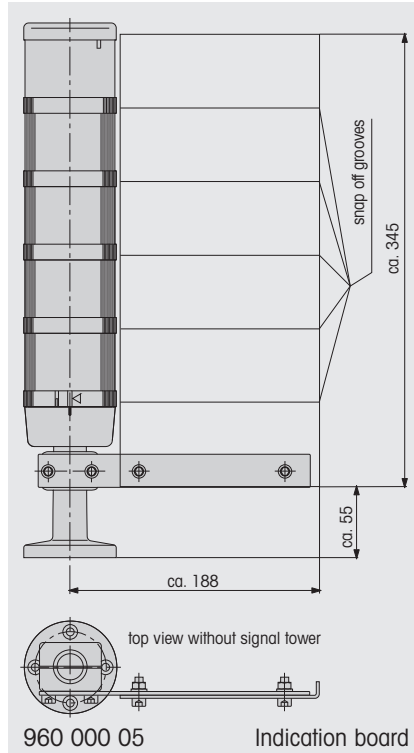
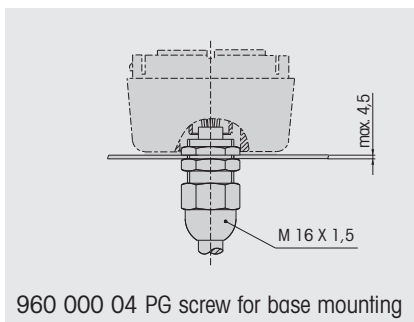
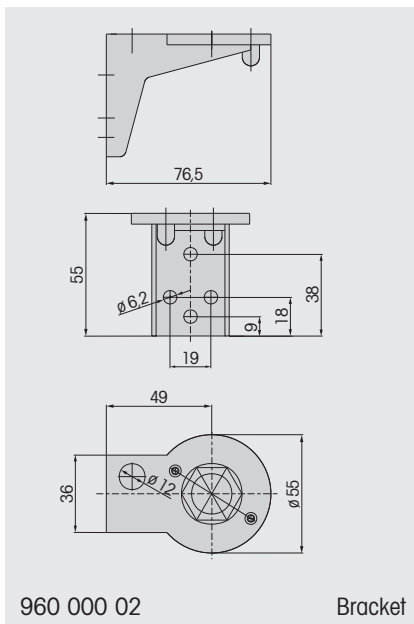
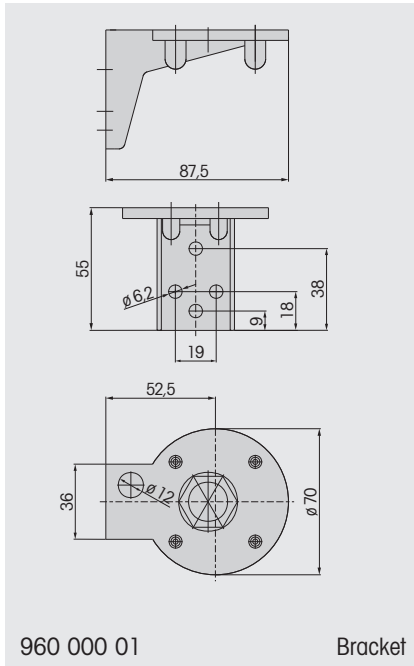
KombiSIGN 50



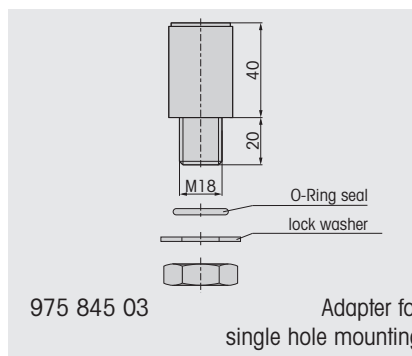
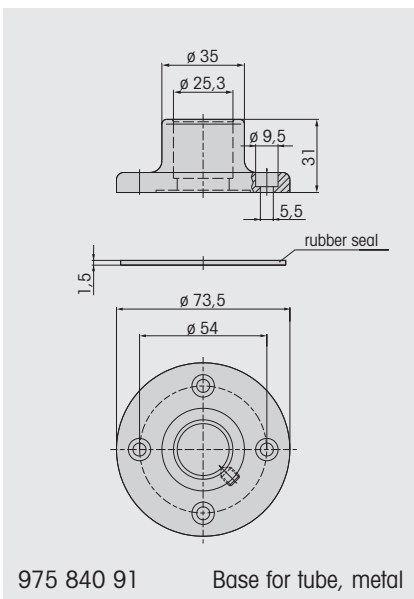
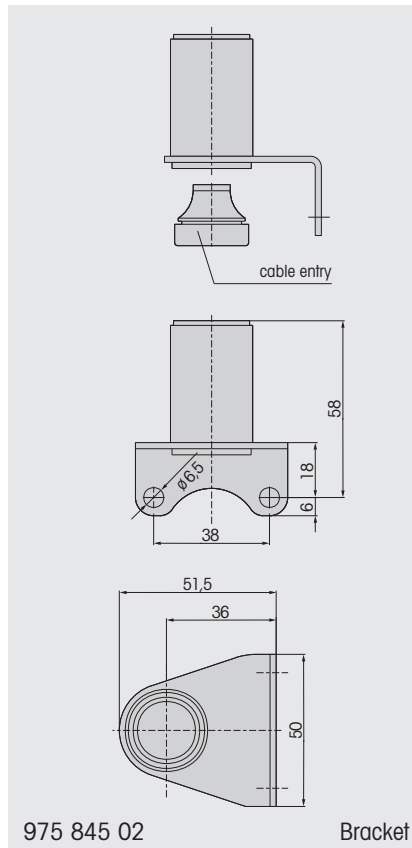
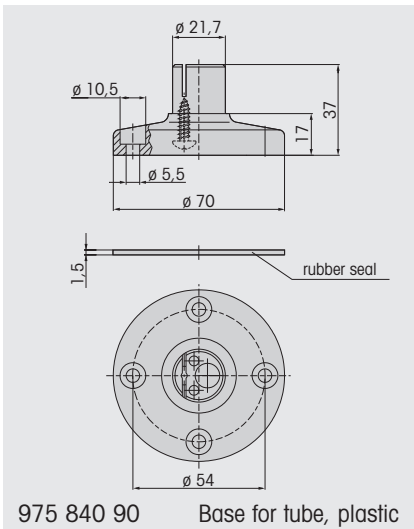
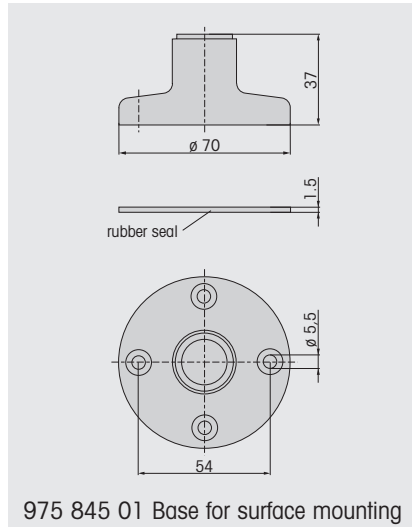
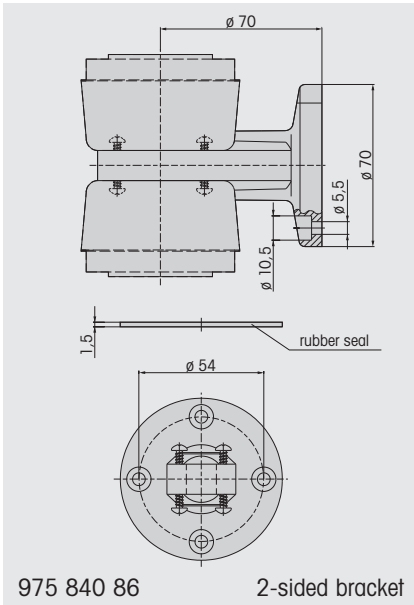
845



Technical Diagrams Accessories



Technical Diagrams Accessories



WERMA Product Groups

Signal Towers



Optical Signal Devices



Optical-Audible Signal Devices



Audible Signal Devices



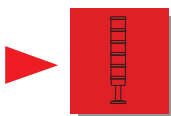




Ex-Signal Devices



The WERMA Product Range

Please ask for our detailed catalogue.



-  Signal Towers
-  Optical Signal Devices
-  Optical-Audible Signal Devices
-  Audible Signal Devices
-  Ex-Signal Devices



WERMA
SIGNALTECHNIK

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78604 Rietheim-Weilheim
Phone +49 74 24 95 57 0
Fax +49 74 24 95 57 44
www.werma.de
info@werma.de

KombiSIGN 50

► Protection rating IP 54

Slim design
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.



KombiSIGN 70

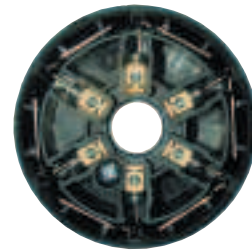
► Protection rating IP 54

For use in normal
conditions

Series 840

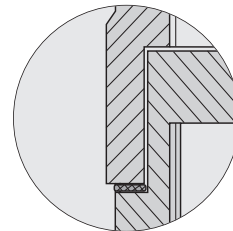
Not compatible with
KombiSIGN 71

Terminal element



Screwable
connection

Optically different
to KombiSIGN 71 due to:



- Flat packing
- No phase on
dome edge



- Conical
terminal element

KombiSIGN 71 **NEW**

► Protection rating IP 65

For use in extreme conditions

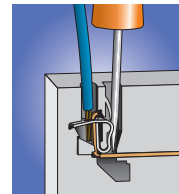
Series 640

Not compatible with KombiSIGN 70

Terminal elements



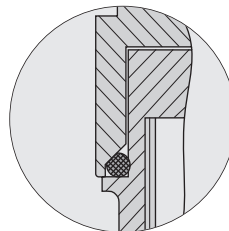
Either: improved screwable connection



see page 11

Or: terminal element with CAGE CLAMP® technology

Optically different to KombiSIGN 70 due to:



- O-Ring seal
- Phase in inside of dome



- Cylindrical terminal element



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

KombiSIGN Signal Towers

► Complete Programme

The KombiSIGN programme offers the customer the most diverse beacon elements in all voltages; these can be combined as required. All in all, KombiSIGN offers a solution for every signalling field.

PERMANENT LIGHT ELEMENTS:

With socket B 15d for filament bulbs and LEDs.



LED PERMANENT LIGHT:

LED permanent light elements with integral Chip-On-Board technology have a high light intensity and durability.



FLASH ELEMENTS:

Flash elements can be combined as required with other signal elements within a signal tower.



LED ELEMENTS:

For Blinking and Rotating light – high light intensity and durability.



Flexible combination of optical and audible signal elements.

► Comprehensive range of audible elements

KombiSIGN audible elements do not require an open sound outlet. This ensures the high protection rating of IP 54 or IP 65 – even at a volume of up to 100 dB.

VOCAL ELEMENT:

Up to 15 different texts or melodies can be recorded or played with the vocal element.



AUDIBLE ELEMENTS:

The KombiSIGN programme offers a huge selection of audible signal elements for each application.



KombiSIGN Signal Towers

▶ Bayonet screw

WERMA is the first signal beacon manufacturer with a quick screw system. The bayonet screw makes it possible to connect elements both mechanically and electrically in seconds and the exchange of elements or bulb changes are made quick and easy as no tools are required.

SIMPLE OPERATION



▶ Great diversity of accessories

A huge range of accessories enables the customer to put together signal towers which are both aesthetically pleasing and competitively priced for all fields of use.



▶ Modular Signal Tower system in different sizes

KombiSIGN is the only signal tower system with bayonet screw in different sizes. The modular assembly makes it easy to find a fitting combination for every application.

LED with Chip-On-Board technology (COB)

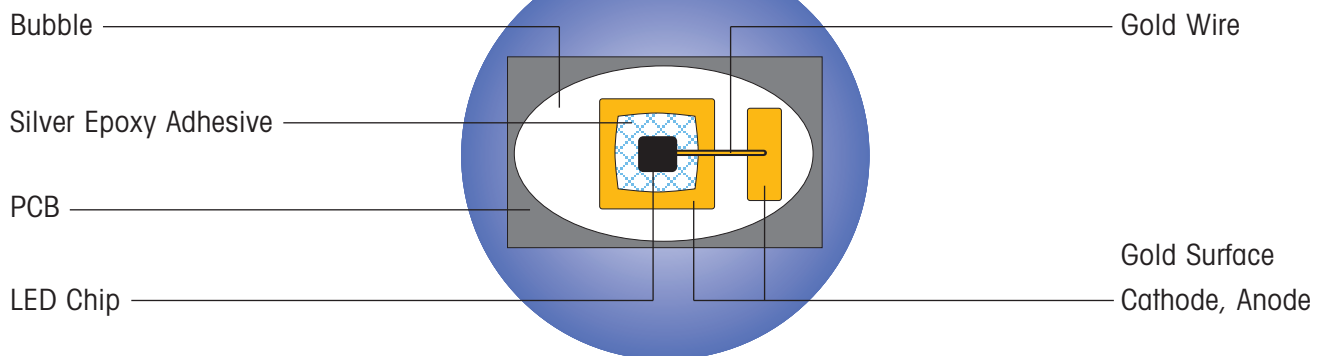
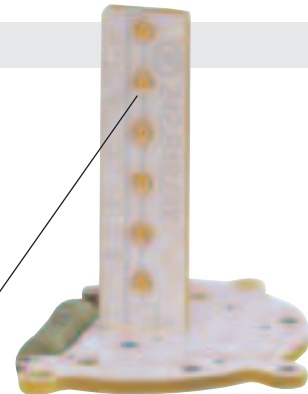
► WERMA Signal Towers with LED-COB

The need for high operational safety has increased the importance of light diodes in signal technology. WERMA has adopted a totally new and revolutionary approach with the introduction of Chip-On-Board technology. This involves bonding LEDs with 180° visibility directly onto a gold-plated printed circuit board.

STRIP WITH LED-COB

LED chip-on-board technology involves setting the individual LED chips directly onto the gold-plated contact surface of the printed circuit board with the aid of an automatic bonding system. Bonding follows using a gold wire to the antipole.

The colours clear, green and blue have a higher light intensity than red and yellow; here only four of the six gold surfaces are fitted with LED chips.



OUTSTANDING FEATURES OF LED-COB:

- Extreme durability
- Low current consumption
- High resilience
- Resistance to vibration and mechanical wear and tear

LED with Chip-On-Board technology (COB)

Two models with COB technology are available:
As LED bulb and as an integral element.

1

LED BULB BA 15d

The compact construction form has made it possible to produce an independent LED bulb with a BA 15d dome. Bulb 956 can be inserted into permanent beacons with a B 15d socket instead of a conventional light bulb.

- High light intensity with 360° visibility
- High light efficiency with optimised prism form
- Manual grip facility on dome



LED BULB 956 IN PLACE OF FILAMENT BULB

LED Bulb 956 can be inserted into permanent light elements with BA 15d socket instead of a conventional bulb.



OPTIMISED FOR USE IN WERMA SIGNAL TOWERS

LED Bulb 956 is optimised for use in WERMA signal towers.



2

COB-STRIPS IN LED PERMANENT LIGHT ELEMENT

An LED-COB strip is integrated into the housing of LED permanent light.

- Life duration of up to 100.000 hours
- 360° visibility
- Protective switch for current limitation and surge voltage





Bracket (accessory)



Base with tube (accessory)

- High protection rating IP 65
- Signal tower system 70 mm ø modular construction
- 360° visibility
- Flexible combination of optical and audible devices

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 and accessories:	Polyamide, high impact, black
Dome:	Polycarbonate, transparent
Fixing:	Base mounting Tube mounting, for tube ø 25 mm Bracket mounting
Socket:	Bayonet, B 15 d, for bulb max. 7 W
Connection:	CAGE CLAMP® technology up to 2,5 mm ² or screwable connection M3 Contact protection according to VDE
Element seal:	Standard 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 Bulbs not included in assembly	12 - 240 V
Blinking light element	24 V ≅ 115 V ≅ 230 V ≅
Flashing light element Current consumption: reduced for AS-Interface:	12 V = 24 V = 115 V ~ 230 V ~ 195 mA 125 mA 20 mA 15 mA 80 mA
LED-Permanent light element Current consumption: Starting current:	24 V ≅ 115 V ~ 230 V ~ 45 mA 25 mA 25 mA < 0,5 A
LED-Blinking light element Current consumption: Starting current:	24 V ≅ 40 mA < 0,5 A
LED-Rotating light element Current consumption: Starting current:	24 V ≅ 70 mA < 0,5 A

TECHNICAL DIAGRAMS

see page 24

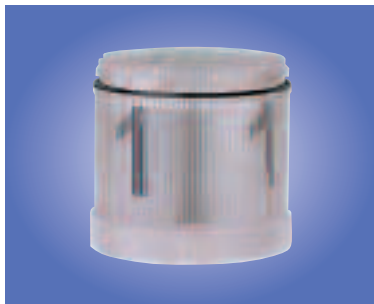
ACCESSORIES

see pages 26 + 27





Permanent / Blinking / Flashing light element



Permanent light, clear with text

Life duration
up to 100.000 h



LED element



Audible element



Terminal element with cap

ORDER SPECIFICATIONS OPTICAL ELEMENTS:

Permanent light element	12-240 V		
red	641 100 00		
green	641 200 00		
yellow	641 300 00		
clear	641 400 00		
blue	641 500 00		
Blinking light element	24 V ≐	115 V ≐	230 V ≐
red	642 100 75	642 100 77	642 100 78
green	642 200 75	642 200 77	642 200 78
yellow	642 300 75	642 300 77	642 300 78
clear	642 400 75	642 400 77	642 400 78
blue	642 500 75	642 500 77	642 500 78
Flashing light element	24 V =	115 V ~	230 V ~
red	643 100 55	643 100 67	643 100 68
green	643 200 55	643 200 67	643 200 68
yellow	643 300 55	643 300 67	643 300 68
clear	643 400 55	643 400 67	643 400 68
blue	643 500 55	643 500 67	643 500 68
LED-Permanent light element	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 element	24 V ≐		
red	644 110 75		
green	644 210 75		
yellow	644 310 75		
clear	644 410 75		
blue	644 510 75		
LED-Rotating light element	24 V ≐		
red	644 130 75		
green	644 230 75		
yellow	644 330 75		
clear	644 430 75		
blue	644 530 75		

ORDER SPECIFICATIONS AUDIBLE ELEMENTS:

Buzzer element	24 V ≐	115 V ≐	230 V ~
85 dB, 25 mA, IP 65, continuous or pulsating tone	645 800 75	645 800 77	645 800 68
Siren element	24 V =		
105 dB, 100 mA, IP 40 continuous tone alternating	645 830 55		
Multi-functional Siren	24 V ≐ / 80 mA	115 V ~ / 40 mA	230 V ~ / 40 mA
100 dB, 40 mA, IP 65, 8 different tones, volume adjustable	645 820 75	645 820 67	645 820 68
Multi-functional Siren, with remote control	24 V =		
100 dB, 80 mA, IP 65, 7 different tones can be triggered remotely, volume adjustable	645 850 55		

ORDER SPECIFICATIONS TERMINAL ELEMENTS:

Terminal element for tube mounting including cap	CAGE CLAMP®	Screw connection
	640 810 00	640 830 00
Terminal element for bracket or base mounting including cap and seal	640 800 00	640 820 00

Accessories for Signal Tower KombiSIGN 71

ORDER SPECIFICATIONS:

	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 base mounting, with cable gland	960 000 01
	Bracket for surface mounting, with cable gland	960 000 02
	Bracket for 1-sided mounting incl. rubber seal	975 840 85
	Bracket for 2-sided mounting incl. rubber seal	975 840 86
	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
	800 mm long	975 840 80
	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	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" screw	975 840 02
	Cable gland for surface mounting M 16 x 1,5	960 000 04

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