KombiSIGN 70 Signal Tower

The Highlights for KombiSIGN 70

843 LED Permanent light element ultrabright

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

See page 50

843 LED EVS element

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

See page 51

843 LED Permanent light element multicolour

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

See page 52

NEW

844 Vocal element

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

See page 55 + 56

844 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 57

NEW

840 Terminal element M12

• Quick and easy installation
• With practical M12 connector

See Seite 58

840 AS-Interface element

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

See page 59

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.

WERMA
SIGNALTECHNIK

This is how you can assemble your Kombi*SIGN* 70 signal tower

▶ **STEP 1**
Select the required optical or audible elements in the correct voltage.

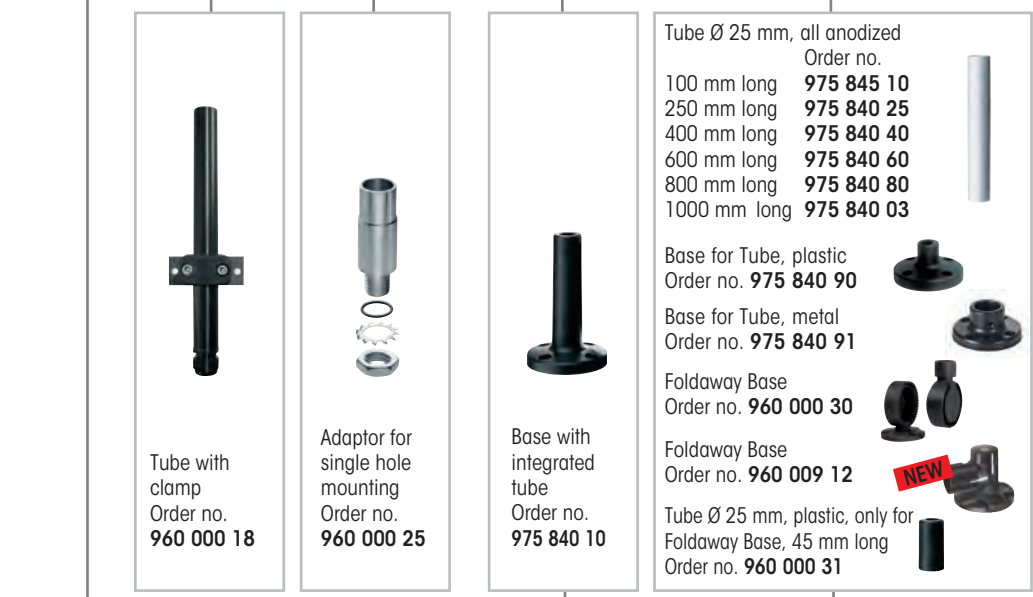Many Kombi*SIGN* highlights are also available (for details see page 46).

NEW

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.

Base Mounting

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

Terminal element M12
Order no. **840 850 55**

Tube Mounting

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

Terminal element M12
Order no. **840 860 55**

▶ **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**

Foldaway Base
Order no. **960 009 12** **NEW**

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.

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.

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

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

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

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

NEW Corner fixing bracket
Order no. **960 000 41**

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

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

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

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

NEW Corner fixing bracket
Order no. **960 000 41**

IP 54

Bracket (accessory)

IP 54

Tube mounting (accessory)

• **Clear signalling, even in unfavourable light conditions**

• **LED light elements have an extremely long life and low current consumption**

ℹ TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	70 mm x 65.5 mm
Lens:	PC, transparent
Socket:	Bayonet, BA15d, for bulb max. 5 W
Element seal:	Pre-mounted with each module
Protection rating:	IP 54

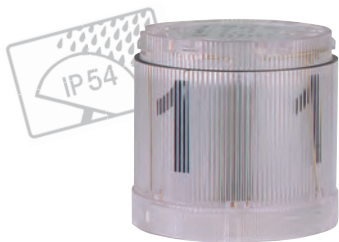|			
Permanent light element	12-240 V AC/DC		
	Bulb not included in assembly		
Life duration:	Dependent upon the bulbs used		
LED Permanent light element	24 V AC/DC	115 V AC	230 V AC
Current consumption:	< 30 mA	< 20 mA	< 20 mA
Life duration:	50,000 hrs		
LED Permanent light element ultrabright	24 V DC		
Current consumption:	Max. 195 mA		
Life duration:	Up to 50,000 hrs		
Technical specifications see page 51.			
Flashing light element (Xenon)	24 V DC	115 V AC	230 V AC
Current consumption:	125 mA	22 mA	15 mA
Life duration:	4 x 10^6 flashes		
Reduced for AS-Interface:	80 mA		
Flash frequency:	C. 1 Hz		
LED Flashing light element	24 V DC		
Current consumption:	< 35 mA		
Life duration:	50,000 hrs		
Flash frequency:	C. 1 Hz (Double Flash)		
LED EVS* element	24 V 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 51.			
LED Blinking light element	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		
LED Rotating light element	24 V AC/DC		
Current consumption:	40 mA		
Life duration:	50,000 hrs		
Rotation frequency:	C. 120 r.p.m.		
LED Permanent Light Element multicolour	24 V DC		
Life duration:	50,000 hrs		
Current consumption:	< 120 mA		
Possible colours:	Red, yellow, green, white, blue, violet, turquoise		
Technical specifications see page 52.			

842 X10 55
Class 2

c Ⓤ US   C€   ⒺⒶⒸ

IP 54   +50°C / -20°C   24 V PLC

WERMA SIGNALTECHNIK

**(LED) Permanent/
Flashing light element**

**Permanent light element,
clear with info**

evs®
enhanced visibility system

Patent
approved

LED EVS element

Life duration
up to 50,000 hrs

LED element

LED element multicolour

🛒 **ORDER SPECIFICATIONS OPTICAL ELEMENTS:**
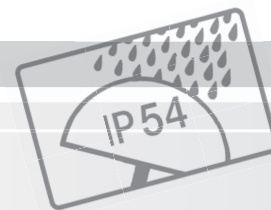
Permanent light element	12-240 V AC/DC		
red	**840 100 00**		
green	**840 200 00**		
yellow	**840 300 00**		
clear	**840 400 00**		
blue	**840 500 00**		

Bulb not included in assembly. Accessories see page 67.

LED Permanent light element	24 V AC/DC	115 V AC	230 V AC
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 Permanent light element ultrabright	24 V DC
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 DC (ASI)	24 V DC	115 V AC	230 V AC
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 DC
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 DC
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 AC/DC	115 V AC	230 V AC
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 AC/DC
red	**843 130 55**
green	**843 230 55**
yellow	**843 330 55**
clear	**843 430 55**
blue	**843 530 55**

LED Permanent light element multicolour	24 V DC
multicolour	**843 450 55**

Further voltages on request.

📏 **TECHNICAL DIAGRAMS:**

see page 318 onwards

WERMA
SIGNALTECHNIK

843

LED Permanent Light Element ultrabright for Kombi*SIGN* 70

- **Up to 20 times brighter than conventional LED elements**
- **Extremely good visibility - even in direct sunlight**
- **Shock-proof and vibration-resistant**
- **Maximum brightness via intelligent LED control**
- **Low current consumption and maintenance-free**

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

🛒 ORDER SPECIFICATIONS:

Voltage	24 V DC
Current consumption	Max. 195 mA
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.

Further Information can be found in the chapter "General Information" beginning on page 354.
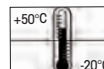
📏 TECHNICAL DIAGRAMS:

Maximum brightness via intelligent LED control

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

Class 2

c ⓊL US   CE   EAC   IP 54   +50°C / -20°C   PLC

See note on page 347

WERMA SIGNALTECHNIK

843 LED EVS* Element for Kombi*SIGN* 70

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 65.5 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	24 V DC
Current consumption	350 mA	250 mA
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 "General Information" on page 352.

Please note the photosensitive epilepsy warning on page 352.

📏 TECHNICAL DIAGRAMS:

see page 319

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

Class 2

See note on page 347

IP54   +50°C -20°C   PLC

843

LED Permanent Light Element multicolour for Kombi*SIGN* 70

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

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

- 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

ℹ TECHNICAL SPECIFICATIONS:

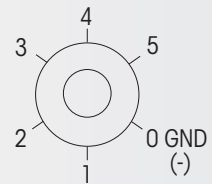|	
Dimensions (Ø x Height):	70 mm x 65.5 mm
Lens:	PC, transparent
Colours:	LED permanent
Possible Colours:	Red, yellow, green, white, blue, violet, turquoise
Seal:	Pre-mounted with each element
Number of modules possible:	Max. 3 (including Multicolour element)

🛒 ORDER SPECIFICATIONS:

Voltage	24 V DC
Current consumption	< 120 mA
LED permanent light multicolour	**843 450 55**

⚠ 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

```
       4
   3       5

   2       0 GND
       1      (-)
```

TECHNICAL DIAGRAMS:

see page 319

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

cULus   CE   EAC   86 g   IP 54   +50°C -20°C   PLC

WERMA
SIGNALTECHNIK

• **Audible element sound output up to 105 dB**

ℹ TECHNICAL SPECIFICATIONS:

Life duration up to 5,000 hrs

Dimensions (Ø x Height):	see below
Lens:	PC/ABS
Element seal:	Pre-mounted with each module
Protection rating:	IP 54
	(Order no. 844 123 55 = IP 40)

Buzzer element	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		

Siren element	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

Multi-functional Siren	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 different tones		

Multi-functional Siren, with external control	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
Tone triggering:	7 diff. tones can be triggered externally

Siren element with self-adjusting sound output	24 V DC
Technical specifications see page 57.	

Vocal element	24 V DC (max. 88 dB)
Technical specifications see page 55.	

NEW **High output vocal element**	24 V DC (max. 102 dB)
Further Information:	No UL approval
Technical specifications see page 56.	

🛒 ORDER SPECIFICATIONS AUDIBLE ELEMENTS:

see next page

Bracket (accessory)

Tube mounting (accessory)

See note on page 347

c (UL) US   CE   EAC   IP54   +50°C / -20°C   24 V PLC

WERMA SIGNALTECHNIK

IP 54

Siren element
844 123 55

Vocal element
with up to 88 dB

NEW

High output vocal element
with up to 102 dB

🛒 **ORDER SPECIFICATIONS AUDIBLE ELEMENTS:**

Buzzer element	24 V AC/DC	115 V AC	230 V AC
	844 118 55	**844 118 67**	**844 118 68**

Siren element	24 V DC		
	844 123 55		

Multi-functional Siren	24 V AC/DC	115 V AC	230 V AC
	844 126 55	**844 126 67**	**844 126 68**

Multi-functional Siren, with external control	24 V DC		
	844 126 95		

Siren element with self-adjusting sound output	24 V DC		
	844 810 55		

Vocal element	24 V DC (max. 88 dB)		
	844 840 55		

NEW High output vocal element	24 V DC (max. 102 dB)		
	844 860 55		

📏 **TECHNICAL DIAGRAMS:**

see page 319 onwards

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

Signal Towers · modular
Kombi*SIGN* 70

German utility model approved

- 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

ℹ TECHNICAL SPECIFICATIONS:

Life duration up to 5,000 hrs

Dimensions (Ø x Height):	70 mm x 110 mm
Material:	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 service pack 4, Windows XP, Windows Vista, Windows 7
Assembly:	Vocal Element, USB connection cable and software

🛒 ORDER SPECIFICATIONS:

Vocal element	24 V DC
Current consumption	< 500 mA
Vocal element	**844 840 55**

📏 TECHNICAL DIAGRAMS:

see page 319

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

See note on page 347

c ℯ US CE EHC 260 g IP 54 +50°C -20°C max 88 dB

844   Vocal Element for Kombi*SIGN* 70

NEW

- 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

Life duration up to 5,000 hrs

ℹ TECHNICAL SPECIFICATIONS:

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	**844 860 55**

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

⚠ ADDITIONAL INFORMATION:
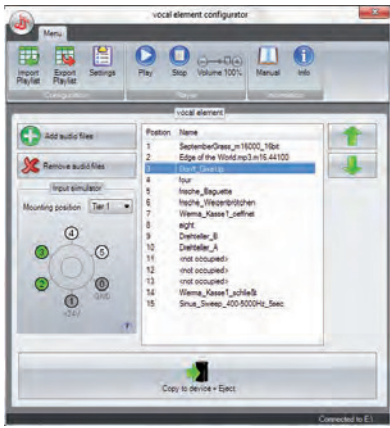
Further installation examples:

To ensure IP protection it is recommended that the vocal element is fitted with the sound outlet facing downwards.
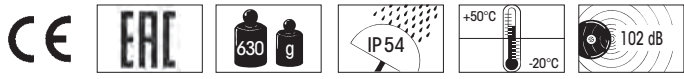
Optimum distribution of sound is thus ensured.

📏 TECHNICAL DIAGRAMS:

see page 320

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

See note
on page 347

CE   EAC   630 g   IP 54   +50°C / -20°C   102 dB

WERMA
SIGNALTECHNIK

844

Siren Element with self-adjusting sound output for Kombi*SIGN* 70

- 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

Patent approved

ℹ TECHNICAL SPECIFICATIONS:

Life duration up to 5,000 hrs

Dimensions (Ø x Height):	70 mm x 110 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 DC
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.

📏 TECHNICAL DIAGRAMS:

CE | EHC | 125 g | IP 54 | +50°C -20°C | max 100 dB | PLC

Terminal Elements for KombiSIGN 70

IP 54

Terminal element with cap

• Bayonet locking mechanism enables quick and easy assembly of the signal tower

• The ideal solution for every installation

ℹ TECHNICAL SPECIFICATIONS:

Dimensions (Ø x Height):	See below
Lens:	Terminal element: PA-GF, high-impact
	Cap: PC
Fixing:	Base mounting
	Tube mounting, for tube Ø 25 mm
	Bracket mounting (accessory)
Cable entry:	Cable diameter max. 14 mm
Element seal:	Pre-mounted with each module
Protection rating:	IP 54 (with cap)
Number of modules possible:	Max. 5

	Tube mounting	Base mounting
Screw terminal		
Dimensions (Ø x Height):	70 mm x 42,5 mm	70 mm x 42,5 mm
Connection:	Screw terminal max. 2.5 mm²	
Voltage:	12-240 V AC/DC	12-240 V AC/DC
	Incl. cap	Incl. cap and seal
Terminal element M12		
Dimensions (Ø x Height):	70 mm x 56 mm	70 mm x 50 mm
Connection:	M12 connector (8 pole)	M12 connector (8 pole)
Voltage:	12-24 V DC	12-24 V DC
Current carrying capacity:	≤ 2 A	≤ 2 A
	Incl. cap	Incl. cap and seal
	No UL approval	No UL approval

NEW (beside Terminal element M12)

🛒 ORDER SPECIFICATIONS TERMINAL ELEMENTS:

	Tube mounting	Base mounting
Screw terminal	**840 080 00**	**840 085 00**
Terminal element M12	**840 860 55**	**840 850 55**

NEW

⊞ ACCESSORIES:

Suitable accessories can be found on page 67.

TECHNICAL DIAGRAMS:

NEW

IP 54

Terminal element with practical M12 connection socket in base

840 08X 00

c ⓤ us   CE   EAC   IP54   +50°C / -20°C   PLC

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SIGNALTECHNIK

AS-Interface Element for Kombi*SIGN* 70

- **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_{Hex}	8_{Hex}
ID-Code:	F_{Hex}	A_{Hex}
ID2-Code:	N/A	E_{Hex}
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:	18.5 V … 31.6 V according to the AS-Interface specification
Reverse battery protection:	Integrated
Watchdog:	Integrated
Additional external voltage:	24 V DC

	With internal add. voltage	With external add. voltage
Current carrying cap. Σ Imax:	200 mA	200 mA per signal element
Current consumption max:	210 mA	50 mA
Voltage at signal element:	20 V ... 30 V DC	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 Kombi*SIGN* Signal Tower 70 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 con-siderably 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 351).

TECHNICAL DIAGRAMS:

Cable not included in assembly

LEDs display the current status

Class 2

See note on page 347

Standard Slave · Approval No. 66301

A/B-Slave · Approval No. 66202

77 g

IP54

+50°C / -20°C

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