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# PSD-S AE SM7-4 100DB/3

Siren element, 7 tones, 24 V DC, max. 100 dB(A),  
ton range over 3 signal lines



## Data sheet

7941\_00

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## 1 Description

This audible signal element is designed as a component of a modular signal tower.

According to your requirements, a signal tower may comprise any combination of up to five signal elements. You may use up to five optical signal elements or up to four optical and one audible signal element.

An audible signal element can be used as top element only.

A bayonet locking system establishes the mechanical and electrical connection between the elements.

Connection elements with spring-cage or screw connection can be used for electrical connection of the signal tower.

Mounting elements for base or tube mounting can be used to mount the signal tower.

### Features

- Siren element for 24 V DC
- 7 selectable tones
- Volume can be adjusted using potentiometer
- Tone range over three remotely controlled signal lines (e. g. through outputs of a control system)
- Degree of protection: IP65, when mounted



Make sure you always use the latest documentation.

It can be downloaded at <http://www.phoenixcontact.net/download>.



This data sheet is valid for all products listed on the following page:

## Table of contents

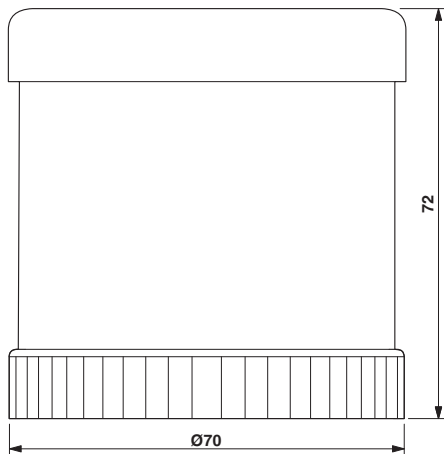
Description .....	1
Ordering data .....	2
Technical data .....	2
Setting the volume .....	4
Determine the tone frequency and the tone type .....	4
Example of a signal tower .....	7
Assembly notes for a signal tower .....	7
Assembling the individual elements .....	8
Example for signal tower dimensions .....	8

## 2 Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Siren element, 7 tones, 24 V DC, max. 100 dB(A), tone range over 3 signal lines, black	PSD-S AE SM7-4 100DB/3	2700141	1

## 3 Technical data

### Dimensions (in mm)



### General data

Diameter	70.00 mm
Height	72.00 mm
Material	Polycarbonate PC
Color	black

**General data**

Weight	80 g
Ambient temperature (operation)	-20 °C ... 50 °C
Degree of protection	IP65, when mounted
Mounting position	Any

**Electrical data**

Input voltage	24 V DC
Inrush current	Max. 500 mA
Current consumption	80 mA
Audible signal type	7 tones, remotely controlled
Signal frequency	1 Hz, 20 Hz, 420 Hz
Tone frequency	approx. 1.6 kHz / 3.4 kHz
Volume	Max. 100 dB(A) (for continuous and pulse tone of 3.4 kHz)
Service life, electrical	min. 5,000 h
Operating time	100 %

**Approvals / conformities**

Conformance with EMC directive 2004/108/EC

For the latest approvals, please visit <http://www.phoenixcontact.net/catalog>.

#### 4 Setting the volume

Set the volume using the potentiometer.

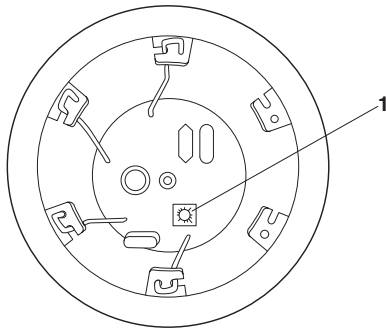


Figure 1 Potentiometer (1) to regulate the volume (view from below)

There is a maximum volume of 100 dB(A) for 3.4 kHz of continuous and pulse tone.

#### 5 Determine the tone frequency and the tone type

Define the tone frequency and tone type through the assignment of the control lines.

The number of the possible tones is subject to the number of the signal elements within the signal tower (see the following tables).

Disconnect the power to the signal tower before changing the tone!



The connections in the **connection element** are illustrated in following tables 1 to 5.

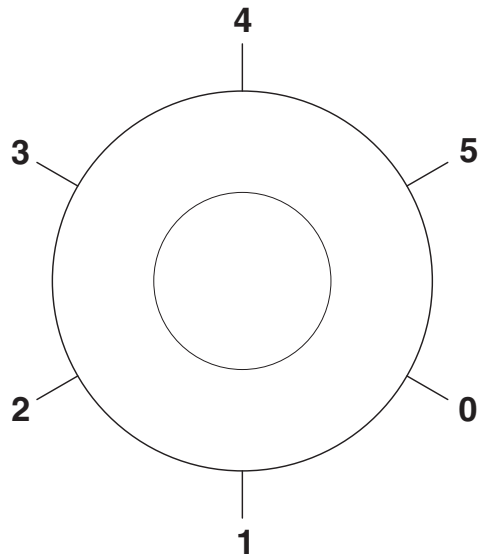


Figure 2 Connections in the connection element

**Possible tones**

No.	Tone type	Tone frequency	Maximum volume
T1	Continuous tone	1.6 kHz	88 dB(A)
T2	Continuous tone	3.4 kHz	100 dB(A)
T3	Pulse tone (1 Hz)	1.6 kHz	88 dB(A)
T4	Pulse tone (1 Hz)	3.4 kHz	100 dB(A)
T5	Trill tone (20 Hz)	1.6 kHz	86 dB(A)
T6	Trill tone (20 Hz)	3.4 kHz	96 dB(A)
T7	Hum tone (420 Hz)	3.4 kHz	90 dB(A)

**Tones depending on the number of the signal elements used**

Keys for the following table:

NC: not assigned or 0 V

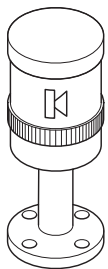


Figure 3 Signal tower: Siren element

1	2	3	4	5	Tone
NC	NC	NC	-	-	-
+24 V	+24 V	NC	-	-	T1
+24 V	+24 V	+24 V	-	-	T2
+24 V	NC	NC	-	-	T3
+24 V	NC	+24 V	-	-	T4
NC	+24 V	NC	-	-	T5
NC	+24 V	+24 V	-	-	T6
NC	NC	+24 V	-	-	T7



Figure 4 Signal tower: Optical signal element and siren element

1	2	3	4	5	Tone
S1	NC	NC	NC	-	-
	+24 V	+24 V	NC	-	T1
	+24 V	+24 V	+24 V	-	T2
	+24 V	NC	NC	-	T3
	+24 V	NC	+24 V	-	T4
	NC	+24 V	NC	-	T5
	NC	+24 V	+24 V	-	T6
	NC	NC	+24 V	-	T7

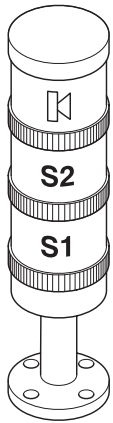


Figure 5 Signal tower: Two optical signal elements and one siren element

1	2	3	4	5	Tone
S1	S2	NC	NC	NC	-
		+24 V	+24 V	NC	T1
		+24 V	+24 V	+24 V	T2
		+24 V	NC	NC	T3
		+24 V	NC	+24 V	T4
		NC	+24 V	NC	T5
		NC	+24 V	+24 V	T6
		NC	NC	+24 V	T7



Figure 6 Signal tower: Three optical signal elements and one siren element

1	2	3	4	5	Tone
S1	S2	S3	NC	NC	-
			+24 V	+24 V	T1
			+24 V	NC	T3
			NC	+24 V	T5

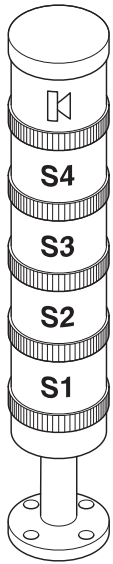


Figure 7 Signal tower: Four optical signal elements and one siren element

1	2	3	4	5	No.
S1	S2	S3	S4	NC	-
				+24 V	T3

## 6 Example of a signal tower

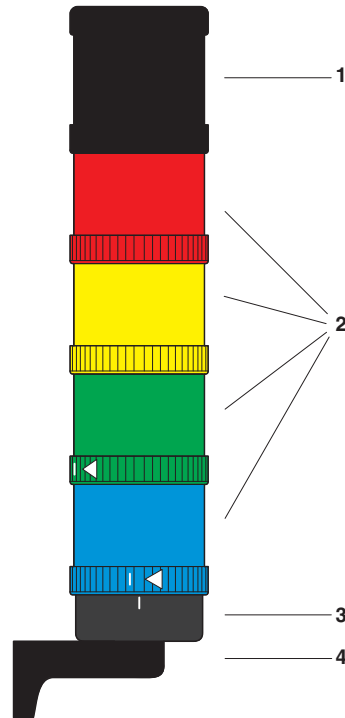


Figure 8 Example of a signal tower

Key:

- 1 Audible signal element
- 2 Optical signal element
- 3 Connection element
- 4 Assembly element

## 7 Assembly notes for a signal tower

- You may use up to five signal elements in a signal tower.
- Use only one audible element in a signal tower and position this element on top.
- When closing the bayonet locking system, observe the markings (see "Assembling the individual elements").



## 8 Assembling the individual elements

The assembly of an audible and an optical signal element is identical. The figure illustrates the assembly of two audible elements.

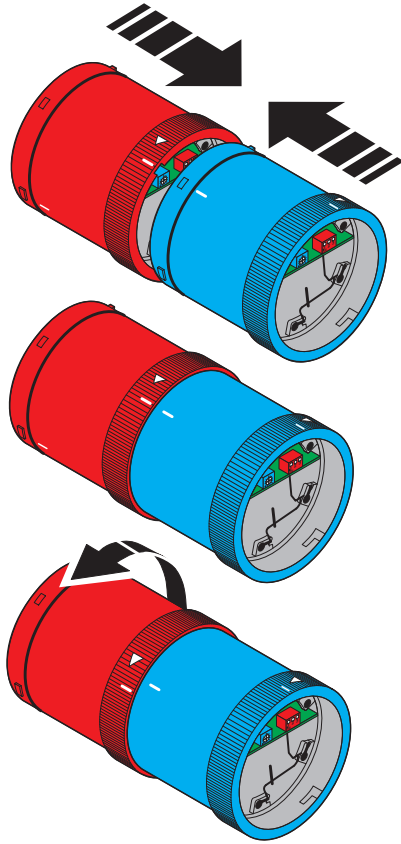


Figure 9 Assembling the individual elements

- Select the elements for your application.
- Connect the elements to be assembled so that the markings are aligned.
- Turn the upper element in the direction of the arrow.

## 9 Example for signal tower dimensions

The following figure shows the dimensions of a typical signal tower.

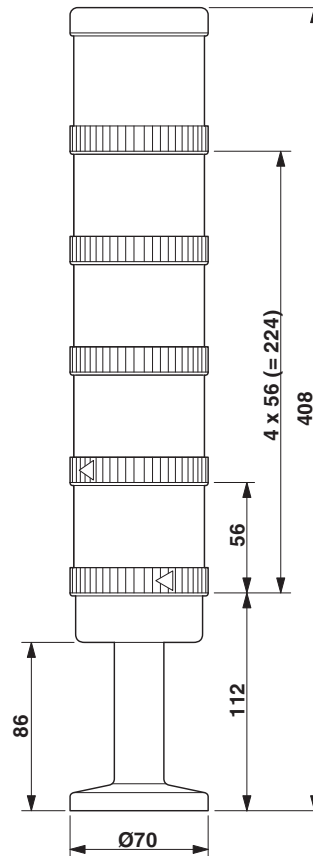


Figure 10 Dimensions of a signal tower (example)