



# **SP 281**

## **SIGNAL TOWER LIGHT**



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*This manual refers to firmware revision named 1.02.*



**WEEE Notice:** Do not throw the device away with the unsorted municipal waste at the end of its life. Instead, hand it in at an official collection point for recycling. By doing this you will help to preserve the environment.

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# 1 SP 281 DESCRIPTION

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## 1.1 MAIN APPLICATIONS

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The **SP 281** is a three-colour lamp and buzz measured signal level indicator tower that is used with certain Svantek instruments, such as the SV 971A Sound Level Meter, to provide on-site alarm signalling.

It is an ideal solution for production halls, warehouses, loading bays, and all areas where ongoing noise level monitoring is required in accordance with health and safety standards and labour inspection requirements.

It can also be integrated with vibration monitoring terminals, such as the SV 803 or SV 804 (future option).



## 1.2 KEY FEATURES

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- Magnetic feet – instant attachment to metal surfaces
- Can be mounted in two orientations (vertical and horizontal)
- Holes (teardrop-shaped) for permanent wall mounting
- Built-in LED power indicator (green)
- 12 V/1 A DC power supply via DIN connector and USB-C Power Delivery
- Indoor use only
- Dimensions: 370 mm x 100 mm x 70 mm
- Three distinct zones of signalisation:
  - GREEN light – level below the set threshold (safe)
  - YELLOW light – threshold reached (caution!)
  - RED light – threshold exceeded (immediate action required!)

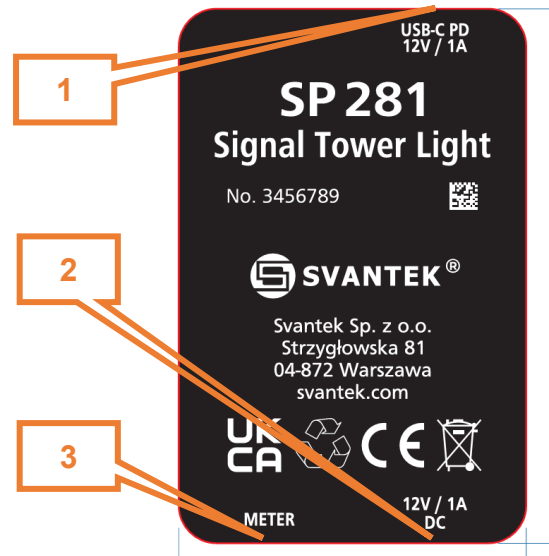
### 1.3 ACCESSORIES INCLUDED

- **SP 281** Signal Tower Lamp with dedicated DC Power Supply (18W)
- **SC 159** USB type C communication cable (1 m)

### 1.4 DESCRIPTION OF THE SP 281 SOCKETS

The SP 281 is equipped with three sockets, which are labelled as follows:

1. **USB-C PD 12V / 1A:** for connecting to the USB-C Power Delivery Source.
2. **12V / 1A DC** (DC 5.5/2.1 connector): for connecting the mains power supply (e.g. SA 15).
3. **METER:** for connecting the lamp to the measuring instrument via the USB-C cable.



### 1.5 POWERING SP 281

The SP 281 can be powered from:

- the power supply DC 12 V, 1 A (e.g., SA 15), or
- the USB-C PD power source.

**Note:** The SP 281 supplies power to the SV 971A instrument.

### 1.6 USING WITH THE SV 971A SOUND LEVEL METER

A few important aspects should be considered when using the SP 281 with the SV 971A:

- The SC 159 cable should be used to connect the SP 281 and the SV 971A. This will ensure the data transmission and SV 971A powering.
- The SP 281 starts signalling when the measurement starts and stops signalling when the measurement stops.
- The trigger thresholds for the yellow and red alarms should be set in the SV 971A configuration menu.

- The SP 281 compares the current Leq result measured in the first profile of the SV 971A (which is renewed on the instrument display every second) with the thresholds defined in the SV 971A menu, triggering a yellow or red light when the appropriate threshold is exceeded.
- To avoid unresponsive behaviour of the SP 281, set the measurement parameters as suggested below.

### 1.6.1 Connections

1. Connect the SV 971A sound level meter to the SP 281 signal tower light using the SC 159 cable.
2. Connect the USB-C Power Delivery source or the SA 15 power adapter to the SP 281 (see Chapter 1.4).

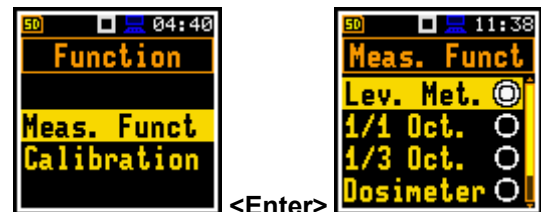
The power status of the SP 281 is indicated by a green LED at the base of the device.

**Note:** It is recommended that the battery is removed from the SV 971A during prolonged use with the SP 281.

### 1.6.2 SV 971A configuration

Configuring the kit involves a few simple steps. Using the **Function** section in the instrument's menu, select the Measurement Function item: **Level Meter**, **1/1 Octave**, **1/3 Octave**, **Dosimeter**, **1/1 Octave & Dosimeter** or **1/3 Octave & Dosimeter**.

**Note:** The SP 281 signal tower light does not function when the **RT60** or **STIPA** functions are selected.



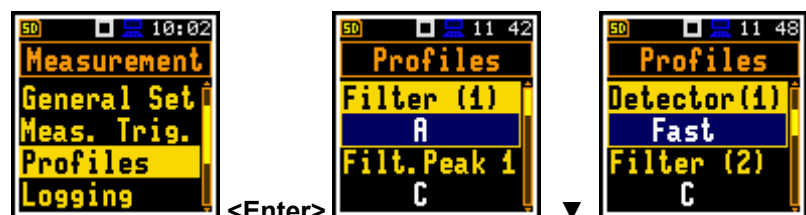
In the **General Settings** item of the **Measurement** section, configure measurement parameters such as **Start Delay** (e.g., 1 s), **Start Synchronisation** (e.g., 1 s), **Integration Period** (e.g., 1 s), and **Repetition Cycles** (e.g., Inf). With such settings, the signal tower will be most responsive.



**Note:** Setting a high value for the Integration Period, particularly an infinite value, may cause the SP 281 to become unresponsive. Setting Repetition Cycles to 1 will stop the measurement after the first measurement cycle and turn off the lights. Setting long Start delay or Start Synchronisation times will result in a long wait before measurements begin, and consequently, the light (green, yellow or red) will turn on with a delay.

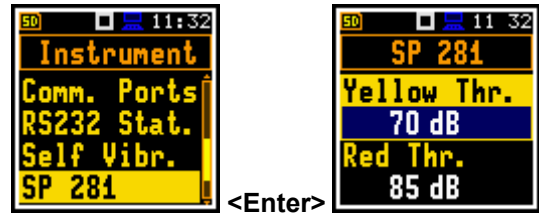


To configure the filter and detector in the Profile 1, open the **Profiles** item of the **Measurement** section and set the **Filter (1)** parameter (**Z**, **A**, **C**, **B** or **LF**) and the **Detector (1)** parameter (**Impulse**, **Fast** or **Slow**).



To set the thresholds for the yellow and red lights, open the **SP 281** item in the **Instrument** section and set thresholds for the yellow (**Yellow Threshold**) and red (**Red Threshold**) lights in the range from **25 dB** to **120 dB**.

Press the **<Start>** button on the instrument keyboard to start measurements.



See also SV 971A User Manual for more details.

### 1.6.3 SP 281 operation

When the **<Start>** button is pressed on the SV 971A, the measurement starts after a delay, and the green indicator lights up. This indicator remains lit as long as the measured Leq level is below the **Yellow Threshold**. Green indicator is off when the measurement is stopped.

If the Leq value measured in the Profile 1 exceeds the **Yellow Threshold** value, the yellow indicator will light up. If the Leq value exceeds the **Red Threshold** value, the red indicator will light up.

If the **Yellow Threshold** value is the same as the **Red Threshold** value, the red indicator will light up.



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