



Electronic Siren SES

- Quick alarming
- Selective information
- Optimum protection
- Large area transmission
- Civil and catastrophe protection

Why is the SES required?

- Fire alarm
- Toxic gases
- Chemical hazard
- Fires
- Flooding
- Radioactive radiation
- Storms
- Smog
- NBC hazard
- Transmission

There is a great number of situations where human lives and values must be saved. If the warning is transmitted selectively and in time great damages can be avoided or the extent can be reduced drastically.

People must have the opportunity to be informed any time and anywhere in case of a catastrophe.

A reliable solution:

SES the electronic siren from PINTSCH BAMAG. The area covering audio communication System for the relevant area with sirens signals the threatening hazard.

Voice transmission can inform the population on current events with a degree of attainability which could be guaranteed by the public media. The solar alternative additionally assures independence from the power network.

From the alarming of the individual fire stations in the rural area up to the complete public safety System - the SES can be applied for each individual case.

Where people have the responsibility for others a warning System, in case of a catastrophe, must be available.

Applications

- Civil and catastrophe protection
- Fire brigades
- Industries
- Nuclear power plants
- Chemical plants
- Dams
- Prisons
- Events
- Large area transmissions



Siren system in Bühl (Germany)

Characteristics of the SES

SES. Compared to the motor and pneumatic siren types the electronic siren from PINTSCH BAMAG has the following advantages:

Maintenance-free

The SES has no motors, compressors nor moving, mechanical parts. Audio signals are only generated by electronic components. Maintenance is therefore not required.

Installation at any location

The low power consumption and the high efficiency of the SES allows an Operation for which the batteries can be charged all year round by the alternative solar module (in central European climatic and lightning conditions). An uninterrupted operation of the system is thus guaranteed. When the location is planned, the power supply availability is irrelevant. Topographic requirements can thus be converted accordingly and the high cost for a 3-phase power supply system can be disregarded.

Independent of power network

If the system has a standard power supply the absolutely service free lead-gel batteries guarantee an operation of at least 10 days even if the power network breaks down. During this time 20 alarms and 20 audio transmissions of 1 minute each can be transmitted. Lead-gel batteries have a long useful life approx. 6 years with rest capacity of 80%. PINTSCH BAMAG sirens only require a power supply of 230 V, with a power consumption of maximum 100 W in charging mode and 6W in stand-by mode.

Emission characteristic

Due to the modular design of the acoustic radiators and the adapter flanges it can be selected between the omni-directional characteristic (0° - 360°) and directional characteristic.

Audio transmissions

Very often acoustic siren signals are not enough to alarm the population. From centralized information on the current situation, required behavior up to the expected duration of the hazard can be transmitted via the SES due to the loudspeaker system. Voice transmissions are possible for each individual event. A voice memory system, where defined transmissions are recorded and transmitted when required, is available alternatively. Thus, unwanted transmissions can be avoided and the central alarming station can be relieved.

Flexible siren signal

Motor sirens generate the signals by driving the rotor at different time intervals. Thus, only a relatively small number of different signals can be generated. A programmable signal generator in the SES generates a random number of tones and signal characteristics.

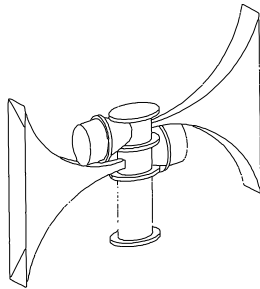
Integrated system

The SES has a modular design. The basic version is already designed with acoustic radiators, microprocessor controlled electronic unit and service-free batteries. This can be expanded alternatively, depending on the application, for example with local or remote tripping, or solar operation. A feedback of the status signals can also be acquired on request.

Centrally controlled siren systems can be integrated into the alternative control center and information software system. Information such as wind and climatic conditions are acquired and processed. The alarming can thus be carried out, for example, dependent on the situation and the weather.

The SES is available in three different power and design types:

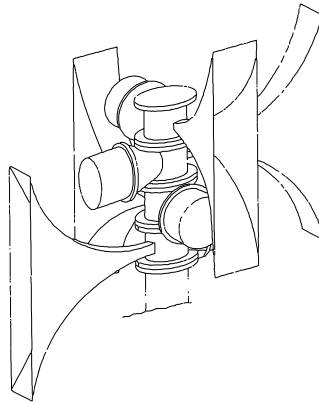
SES 250



250 Watt

111 dB(C)

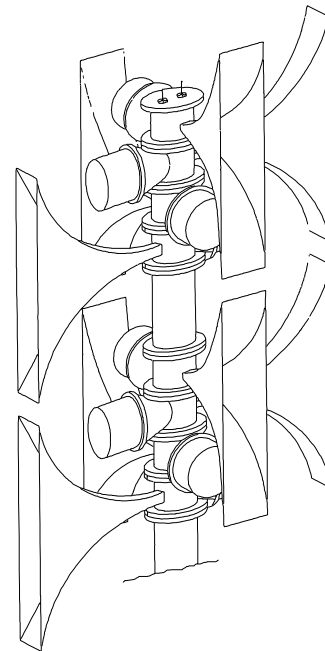
SES 500



500 Watt

114 dB(C)

SES 1000



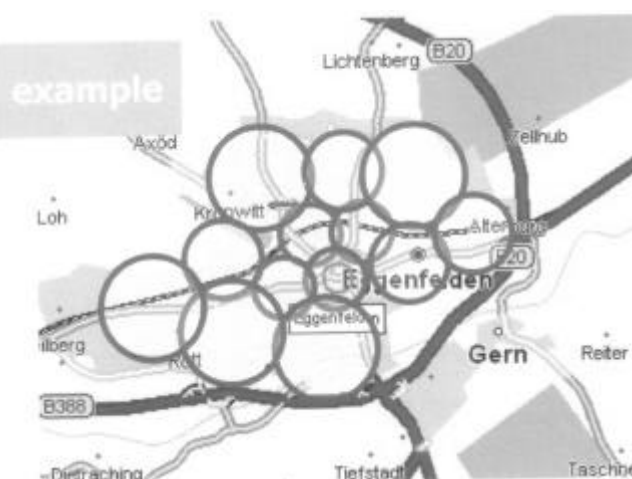
1000 Watt

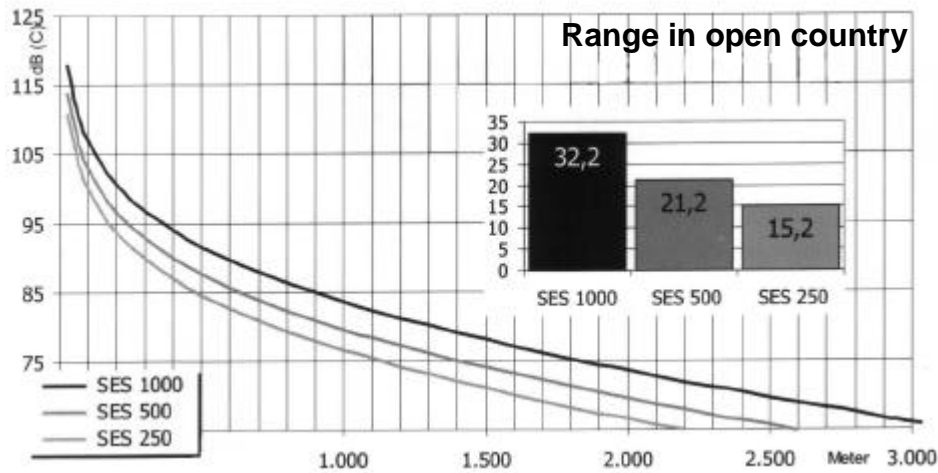
118 dB(C)

The ground surface and size of the relevant area determine the primary selection. Further factors could be climate, ambient noise conditions, and the residential area of the people who have to be warned.

Since the sound level below 60 dB often is not noticed inside of buildings, we recommend as lowest sound pressure level at least 65 dB for a safe warning. At any rate, the alarm level should be 10 dB above the average ambient noise level.

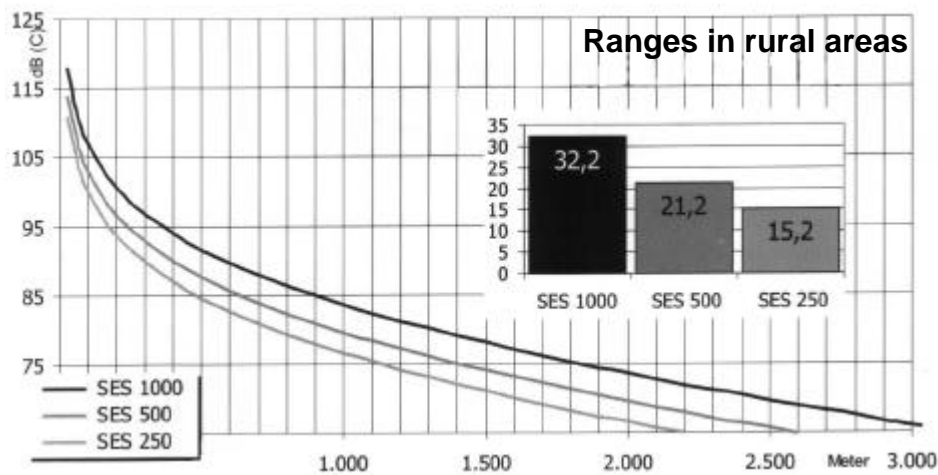
For planning purposes you require a topographic map and the adjacently shown graphic. Depending on the ground surface and the required range which you determine from your map, you will receive the type and number of sirens to suit your purposes. Draw the sound radius on your map. There should be few overlapping in order to avoid sound holes. In hilly and geometrically unfavorable areas it could be more practical to install several 250W and 500W sirens instead of only one central one of 1000W.





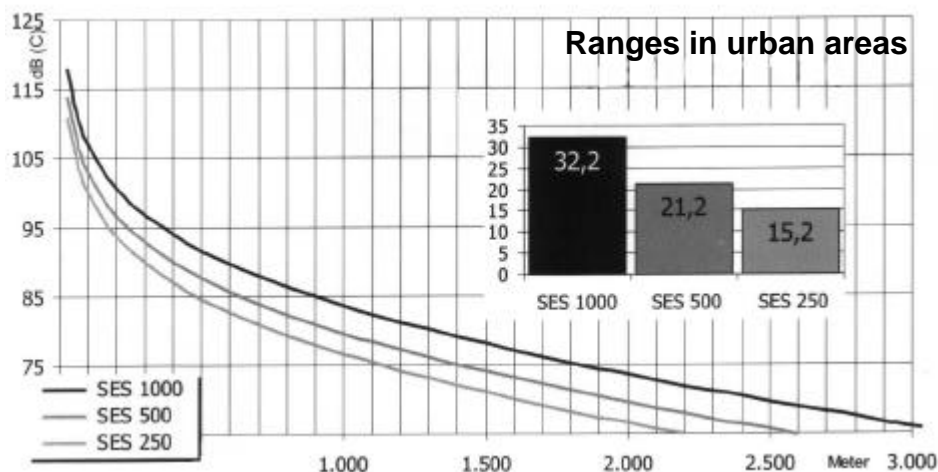
Open areas only damp the sound approx. 0,4dB/100 meters

(plus 6dB on twice the distance)



The damp in rural areas is approx. 1dB/100 meters

(plus 6dB on twice the distance)



The damp in urban areas is approx. 3dB/100 meters

(plus 6dB on twice the distance)

Technical specifications and dimensions

Horns

	SES 250 M05	SES 250 M10	SES 500 M05	SES 500 M10	SES 1000 M05	SES 1000 M10
Sound level dB(C) at a distance of 30m acc. to DIN IEC 804	111 dB(C)		114 dB(C)		118 dB(C)	
Sound Radiation	360 ° or directional					
Basic frequency	410 / 415 Hz					
Temperature range	-50°C to +70°C					
Number of horns	2		4		8	
Adapter flange	1					
Siren driver	2		4		8	
Connectors	2		4		8	
Set of screws	V2A					
Total weight	20,8 kg		47,2 kg		74,4 kg	

Electronics

	SES 250 M05	SES 250 M10	SES 500 M05	SES 500 M10	SES 1000 M05	SES 1000 M10
Power output	250 W	250 W	500 W	500 W	1000 W	1000 W
Number of amplifiers	2				4	
Local siren signals	3 (fire and probe preinstalled in factory, input for the telecontrol system)					
Remote controlled siren signals	up to 5 (can increase depending on the telecontrol system)					
Power supply	230 V AC					
Power input in stan-by mode	6 VA					
Battery power consumption in stand-by mode	approx. 55 mA (without telecontrol system)					
Batteries	2 x 12 V 25 Ah		2 x 12 V 40 Ah		2 x 12 V 55 Ah	
Number of alarms during power failure	Minimum of 20 siren alarms and 20 voice texts of 1 minute each over 10 days at 20°C (without telecontrol system)					
Temperature range for electronic	-40°C to +70°C					
Temperature range for batteries	-25°C to 60°C					
Seal ring and screws	A2					
Cubicle unit (w x h x d) in mm	600 x 600 x 210				600 x 1000 x 250	
Weight	54 kg		67 kg		84 kg	

Scope of supply

	SES 250 M05	SES 250 M10	SES 500 M05	SES 500 M10	SES 1000 M05	SES 1000 M10
External unit with „x“ horns	2	2	4	4	8	8
Number of pressure chambers systems	2	2	4	4	8	8
Adapter flange	■	■	■	■	■	■
Connection section	■	■	■	■	■	■
Cubicle unit Resin power coating, RAL 7032	■	■	■	■	■	■
Maintenance-free batteries	■	■	■	■	■	■
Microprocessor controlled electronic section	■	■	■	■	■	■
Power supply with charger controller	■	■	■	■	■	■
RS 232 interface	×	■	×	■	×	■
Transformer module 24V DC-12V DC (Power supply for telecontrol receiver)	□	□	□	□	□	□
Transformer module 24V DC-12V DC 8A (Power supply for radio equipment)	×	□	×	□	×	□
Fault and status signals (Power supply, front door, battery monitoring, amplifier in operation, short circuit in loudspeaker or interruption)	×	■	×	■	×	■
Antenna support	□	□	□	□	□	□
Interface circuit for radio equipment TX/RX Alternative SES 001	×	■	×	■	×	■
Operating and controlling unit INTERN ¹ Alternative SES 002	×	□	×	□	×	□
Operating and controlling unit EXTERN ² Alternative SES 003	×	□	×	□	×	□
Local voice units (hand-held microphone with amplifier and recorder input) Alternative SES 004	□	□	□	□	□	□
Digital voice memory 180s Alternative SES 005	×	□	×	□	×	□
Solar operation with solar module 2 x 75 W Alternative SES 006	□	□	□	□	□	□
Antenna surge voltage protector Alternative SES 007	□	□	□	□	□	□
Antenna support Alternative SES 008	□	□	□	□	□	□
Support for radio equipment or telecontrol receiver on front door Alternative SES 009	□	□	□	□	□	□

¹ only one of the two alternatives is possible

² only possible in conjunction with interface circuit for radio equipment or operating and controlling unit

■ included in supply

□ alternatively available

× not available for this type

Order codes

<i>BN</i>	<i>Description</i>
5400 / 10	SES 250 M05
5400 / 11	SES 250 M10
5400 / 20	SES 500 M05
5400 / 21	SES 500 M10
5400 / 30	SES 1000 M05
5400 / 31	SES 1000 M10

Alternatives

<i>BN</i>	<i>Description</i>
5400 / 00.10	Interface circuit for radio equipment
5400 / 00.11	Operating and controlling unit INTERN
5400 / 00.12	Operating and controlling unit EXTERN
5400 / 00.13	Local voice units
5400 / 00.14	Digital voice memory 180s
5400 / 00.15	Solar operation with solar module 2 x 75 W
5400 / 00.16	Antenna surge voltage protection
5400 / 00.17	Antenna support
5400 / 00.18	Support for radio equipment or telecontrol receiver on front door