

# Signalling Bell AW 1 - AW 6

**Corrosion-resistant signalling device  
for indoor and outdoor use**

- ▶ Multi-stroke and single-stroke signalling bell
- ▶ Slow-stroke signalling bell with adjustable stroke rate between 200/min. and 30/min.
- ▶ Various flat domes



## Application

The signalling bells are mainly used for clear calling, reporting and warning purposes when it is wanted that a high-pitch bell sound stand out clearly against ambient noise. Different dome sizes enable optimum signalling.

## Design

The driver system of the multi-stroke signalling bell consists of a single-coil electromagnet. A diode in the circuit of the AC variant only allows current to flow every half period, with the result that the striker oscillates in time with the mains frequency. The DC versions are equipped with a non-wearing electronic contact breaker. Their stroke rate is approx. 50 strokes/sec.

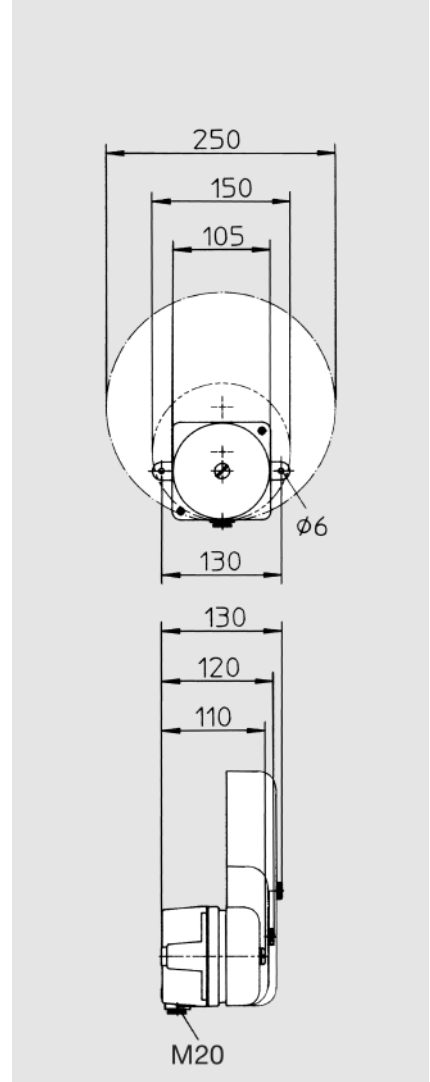
## Signalling bell on a school yard

Different dome sizes enable optimum signalling.



## Technical specifications

Housing	Corrosion-resistant aluminium die cast with surface coated pebble grey (RAL 7001)
Dome	Steel flat dome, pebble grey (RAL 7001) 150 mm and 250 mm (brass bell-shaped dome; steel flat dome 105 mm on request)
Protection degree	IP 55 (IEC 60529)
Protection class	I
Cable gland	1x M20, for cable diameters 8-12 mm
Connection terminals	Cross section: 2.5 mm <sup>2</sup> fine wire 4.0 mm <sup>2</sup> single wire
Operating conditions	Indoors and outdoors
Operating position	Striker pointing downwards
Operating mode	Continuous (for AW 1, AW 2, AW 5 and AW 6) Short-time operation KB 5 min. (for AW 3 and AW 4)
Volume	Approx. 100 to 110 dB(A), 1 m, depending on the size of the dome (Regarding volume specifications, please see the chapter "Technical Informations".)
Temperature range	
Operation	-20 °C to +60 °C
Storage	-30 °C to +70 °C
Approval	AW1/AW2 (GL) German Lloyd Certificate No. 57 073-91HH
Weight	Approx. 1.45 kg with flat dome 150 mm Approx. 2.95 kg with flat dome 250 mm



Subject to change without notice · Printout 03/14

## Order information

### Multi-stroke signalling bell AW 1 / AW 2 (150 mm flat dome)

Type	Name	Rated voltage $U_e$	Operating voltage range $U_e$	Current consumption	Article no.
AW 1	Signalling Bell	12 VAC	+10 %/-15 %	0.60 A	211 621 02
AW 1	Signalling Bell	24 VAC	+10 %/-15 %	0.32 A	211 621 03
AW 1	Signalling Bell	42 VAC	+10 %/-15 %	0.30 A	211 621 04
AW 1	Signalling Bell	60 VAC	+10 %/-15 %	0.24 A	211 621 05
AW 1	Signalling Bell	110 VAC	+10 %/-15 %	0.14 A	211 621 06
AW 1	Signalling Bell	230 VAC	+ 6 %/-10 %	0.06 A	211 621 07
AW 1	Signalling Bell	120 VAC/60 Hz	+10 %/-15 %	0.18 A	211 621 26
AW 1	Signalling Bell	240 VAC/60 Hz	+10 %/-15 %	0.065 A	211 621 27
AW 2	Signalling Bell	6 VDC	+10 %/-15 %	1.2 A	211 621 11
AW 2	Signalling Bell	12 VDC	+10 %/-15 %	0.60 A	211 621 12
AW 2	Signalling Bell	24 VDC	+10 %/-15 %	0.35 A	211 621 13
AW 2	Signalling Bell	48 VDC	+10 %/-15 %	0.30 A	211 621 14
AW 2	Signalling Bell	60 VDC	+10 %/-15 %	0.23 A	211 621 15
AW 2	Signalling Bell	110 VDC	+10 %/-15 %	0.13 A	211 621 16
AW 2	Signalling Bell	220 VDC	+10 %/-15 %	0.07 A	211 621 17

### Multi-stroke signalling bell AW 1 / AW 2 (250 mm flat dome)

Type	Name	Rated voltage $U_e$	Operating voltage range $U_e$	Current consumption	Article no.
AW 1	Signalling Bell	12 VAC	+10 %/-15 %	0.60 A	211 623 02
AW 1	Signalling Bell	24 VAC	+10 %/-15 %	0.32 A	211 623 03
AW 1	Signalling Bell	42 VAC	+10 %/-15 %	0.30 A	211 623 04
AW 1	Signalling Bell	60 VAC	+10 %/-15 %	0.24 A	211 623 05
AW 1	Signalling Bell	110 VAC	+10 %/-15 %	0.14 A	211 623 06
AW 1	Signalling Bell	230 VAC	+ 6 %/-10 %	0.06 A	211 623 07
AW 1	Signalling Bell	120 VAC/60 Hz	+10 %/-15 %	0.18 A	211 623 26
AW 1	Signalling Bell	240 VAC/60 Hz	+10 %/-15 %	0.065 A	211 623 27
AW 2	Signalling Bell	6 VDC	+10 %/-15 %	1.2 A	211 623 11
AW 2	Signalling Bell	12 VDC	+10 %/-15 %	0.60 A	211 623 12
AW 2	Signalling Bell	24 VDC	+10 %/-15 %	0.35 A	211 623 13
AW 2	Signalling Bell	48 VDC	+10 %/-15 %	0.30 A	211 623 14
AW 2	Signalling Bell	60 VDC	+10 %/-15 %	0.23 A	211 623 15
AW 2	Signalling Bell	110 VDC	+10 %/-15 %	0.13 A	211 623 16
AW 2	Signalling Bell	220 VDC	+10 %/-15 %	0.07 A	211 623 17

A half-wave DC current flows in the **AW 1** multi-stroke AC versions.

The contact-breaker system in the **AW 2** DC versions produces an intermittent direct current. When planning the supply leads and fuses, therefore, it must be remembered that the given values are mean current values and the peaks are higher.

Attention must be paid to correct polarity of the connection leads.

## Order information

### Single-stroke signalling bell AW 3 / AW 4 (150 mm flat dome)

Type	Name	Rated voltage $U_e$	Operating voltage range $U_e$	Current consumption	Article no.
AW 3	Signalling Bell	230 VAC	+ 6 %/-10 %	0.1 A	211 622 07
AW 4	Signalling Bell	12 VDC	+10 %/-15 %	2.0 A	211 622 12
AW 4	Signalling Bell	24 VDC	+10 %/-15 %	1.0 A	211 622 13

### Single-stroke signalling bell AW 3 / AW 4 (250 mm flat dome)

Type	Name	Rated voltage $U_e$	Operating voltage range $U_e$	Current consumption	Article no.
AW 3	Signalling Bell	230 VAC	+ 6 %/-10 %	0.1 A	211 624 07
AW 4	Signalling Bell	12 VDC	+10 %/-15 %	2.0 A	211 624 12
AW 4	Signalling Bell	24 VDC	+10 %/-15 %	1.0 A	211 624 13

The single-stroke bell **AW 3** is equipped with an electromagnet system that drives the striker against the dome only once per current-on transition. The maximum permissible duty cycle is 5 min.

The single-stroke bell **AW 4** is equipped with an electromagnet system that drives the striker against the dome only once per current-on transition. The maximum permissible duty cycle is 5 min.

### Slow-stroke signalling bell AW 5 / AW 6 (150 mm)

Type	Name	Rated voltage $U_e$	Operating voltage range $U_e$	Current consumption	Article no.
AW 5	Signalling Bell	230 VAC	+6 %/-10 % 40-60 Hz	Max. 1 A for approx. 10 ms (during a stroke), approx. 10 mA (quiescent current consumption)	211 625 07
AW 6	Signalling Bell	10-30 VDC		Max. 3 A for approx. 10 ms (during a stroke), approx. 10 mA (quiescent current consumption)	211 625 12

### Slow-stroke signalling bell AW 5 / AW 6 (250 mm flat dome)

Type	Name	Rated voltage $U_e$	Operating voltage range $U_e$	Current consumption	Article no.
AW 5	Signalling Bell	230 VAC	+6 %/-10 %	Max. 1 A for approx. 10 ms (during a stroke), approx. 10 mA (quiescent current consumption)	211 626 07
AW 6	Signalling Bell	10-30 VDC		Max. 3 A for approx. 10 ms (during a stroke), approx. 10 mA (quiescent current consumption)	211 626 12

The electronics of the **AW 5** basically consist of an integrated timing pulse generator and zero-voltage switching circuit. The time-rate is given by an RC combination. The time-rate can be adjusted with a potentiometer, which is accessible from outside (after removing the blind plug). At the end of the clock-cycle the zero-voltage switch turns the bell coil on in the voltage crossover phase via a thyristor. The coil drives the striker against the dome for a half wave (10 ms) of the AC supply voltage. The clock cycle is then started again.

The device is equipped with a fuse 5 x 20 mm, 1.25 AT (time-lag).

The electronics of the **AW 6** basically consist of an integrated timing pulse generator circuit.

The time-rate is given by an RC combination. The time-rate can be adjusted with a potentiometer, which is accessible from outside (after removing the blind plug). At the end of the clock-cycle a power transistor switches the bell coil on for approx. 10 ms, driving the striker against the dome. The power transistor is designed in such a way that the striker is operated with the same energy within limits regardless of the power supply's magnitude.

The device is equipped with a fuse (5 x 20 mm, 1.25 AT (time-lag)) and a polarity protection diode.

Attention must be paid to correct polarity of the connection leads.