AW1/F...AW6/F

Signalling Bell

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AC8407/0904

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**

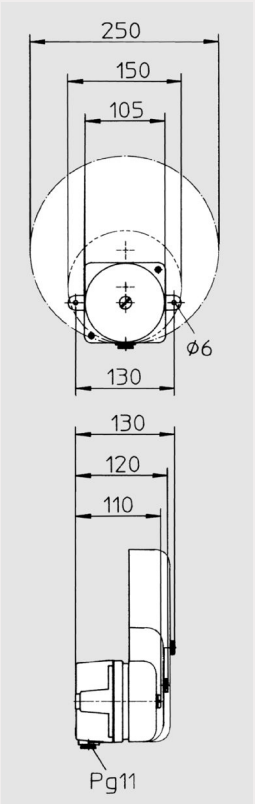
Application

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 7032)
Dome .....Steel flat dome, pebble grey (RAL 7032) 150mm and 250mm
(brass bell-shaped dome; steel flat dome 105mm on request)
Protection degree .....IP 55 (IEC 529)
Protection class I
Cable gland .....1 x Pg11, for cable diameters 8÷12mm
Connection terminals.....Cross section: 2,5 mm² fine wire
4,0 mm² single wire
Operating conditions .....Indoors and outdoors
Operating position .....Striker pointing downwards
Operating mode.....Continuous (for AW1/F, AW2/F, AW5/F and AW6/F)
Short-time operation KB 5 min. (for AW3/F and AW4/F)
Volume.....Approx. 100 to 110dB(A), 1m, depending on the size of the dome
Temperature range
Operation .....-20°C to +60°C
Storage.....-30°C to +70°C
Approval .....(GL) German Lloyd Certificate No. 570734
USSR Register of Shipping Certificate No. 91.048.272
Weight .....Approx. 1.45kg with flat dome 150mm
Approx. 2.95kg with flat dome 250mm

Multi-stroke signalling bell AW1/F - AW2/F available with 150mm or 250mm flat dome

Type	Rated voltage Ue	Operating voltage range Ue	Current consumption
AW1/F	12 Vac	+10 %/-15 %	0,60A
AW1/F	24 Vac		0,32A
AW1/F	42 Vac		0,30A
AW1/F	60 Vac		0,24A
AW1/F	110 Vac		0,14A
AW1/F	230 Vac	+ 6 %/-10 %	0,06A
AW1/F	120 Vac/60 Hz	+10 %/-15 %	0,18A
AW1/F	240 Vac/60 Hz		0,065A
AW2/F	6 Vdc		1,20A
AW2/F	12 Vdc		0,60A
AW2/F	24 Vdc		0,35A
AW2/F	48 Vdc		0,30A
AW2/F	60 Vdc		0,23A
AW2/F	110 Vdc		0,13A
AW2/F	220 Vdc		0,07A

A half-wave DC current flows in the **AW1/F** multi-stroke AC versions.
The contact-breaker system in the **AW2/F** 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.

Single-stroke signalling bell AW3/F - AW4/F available with 150mm or 250mm flat dome

Type	Rated voltage Ue	Operating voltage range Ue	Current consumption
AW3/F	230 Vac	+ 6 %/-10 %	0,1A
AW4/F	12 Vd	+10 %/-15 %	2,0A
AW4/F	24 Vdc		1,0A

The single-stroke bell **AW3/F** or **AW4/F** 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 AW5/F - AW6/F available with 150mm or 250mm flat dome

Type	Rated voltage Ue	Operating voltage range Ue	Current consumption
AW5/F	230 Vac	+6 %/-10 % 40÷60Hz	Max. 1A for approx. 10ms (during a stroke), approx. 10mA (quiescent current consumption)
AW6/F	10–30 Vdc		Max. 3A for approx. 10ms (during a stroke), approx. 10mA (quiescent current consumption)

The electronics of the **AW5/F** 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 **AW6/F** 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.