
DSP204H Flameproof Horn Speaker

User's Manual

DSPPA Acoustic Technology Co., Ltd.



Note: As required by the customer, products of fixed voltage of 100V (can be customized also) and fixed impedance (4~16Ω terminal) are available.

1.5 Operating conditions

- a. Altitude: not greater than 1000m
- b. Ambient temperature: +40℃ max.
-20℃ min.
- c. Humidity: not greater than 95%RH (at +25℃)
- d. No gas or steam that is corrosive to metal or damages the insulation.

1.6 Technical specifications

1.6.1 Applicable standards

GB4028-2008 Degrees of Protection Provided by Enclosure (IP Code)

GB3836.1-2000 Electrical Apparatus for Explosive Gas Atmospheres - Part 1: General Requirements

GB3836.2-2000 Electrical Apparatus for Explosive Gas Atmospheres - Part 2: Flameproof Enclosure “d”

1.6.2 Explosion-proof type: Flameproof

1.6.3 Explosion-proof marking: ExdIICT6

1.7 Environmental and energy impact

1.7.1 The product uses environmentally-friendly Rosh material, generating no pollution to the environment. Also, it features a long service life, and can be recycled when disposed.

1.7.2 The product is constructed with a foldable horn, making the electricity/sound efficiency greatly higher than products of the same type. Therefore, the power and engineering cost are reduced.

1.8 Safety

The product is inspected by the inspection department designated by the State, and proven by explosion-proof certificate and production license, thus guaranteeing a safe and reliable service.

All insulation materials used are non-oxidizing, self-extinguishable and non-toxic types.

2. Construction and Principle of Operation

The enclosure is robust and consists of the rear casing, front cover and cable entry device, which will not have permanent deformation or damaged as 7J impact test proven. The cable entry device uses epoxy resin seal with a length of greater than 20mm.

With a 60–80-mesh stainless steel explosion screen equipped, a certain gap is provided to prevent the fire from spreading.

The audio voltage is fed to the speaker that moves in relation to magnetic force to vibrate air particles for sound generation.

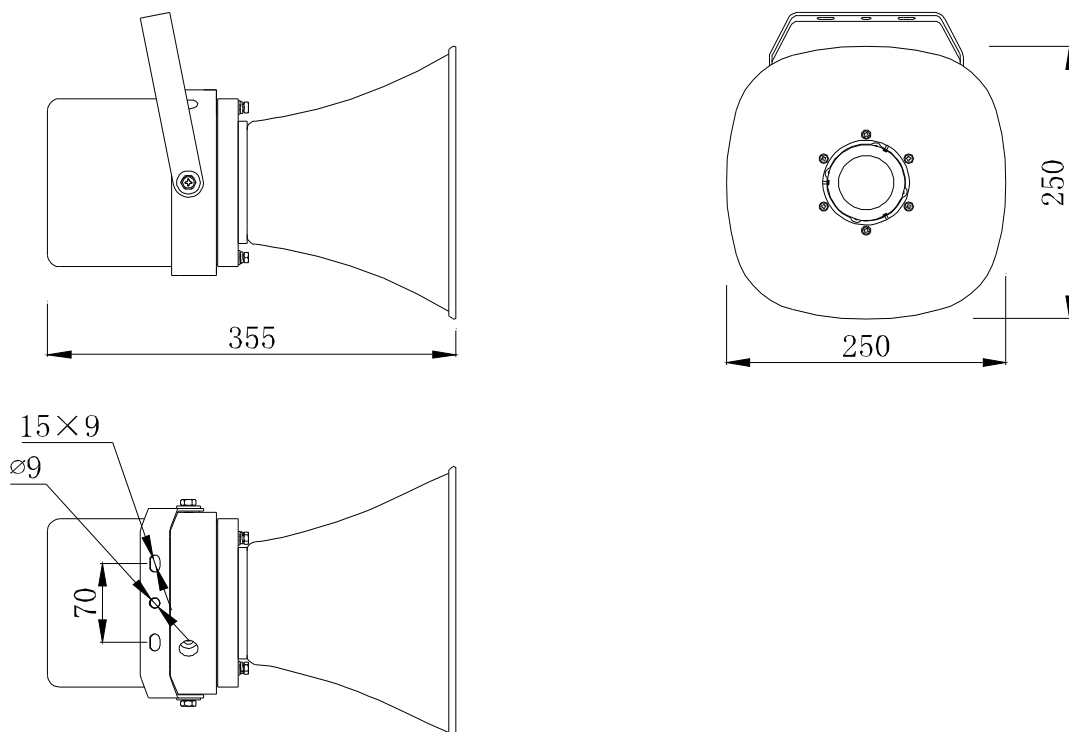
3. Technical Features, Dimensions and Weight

3.1 Specifications:

Characteristic sensitivity: 105dB; effective frequency range: 400Hz–10kHz; explosion-proof marking: ExdIICT6, degree of protection: IP54.

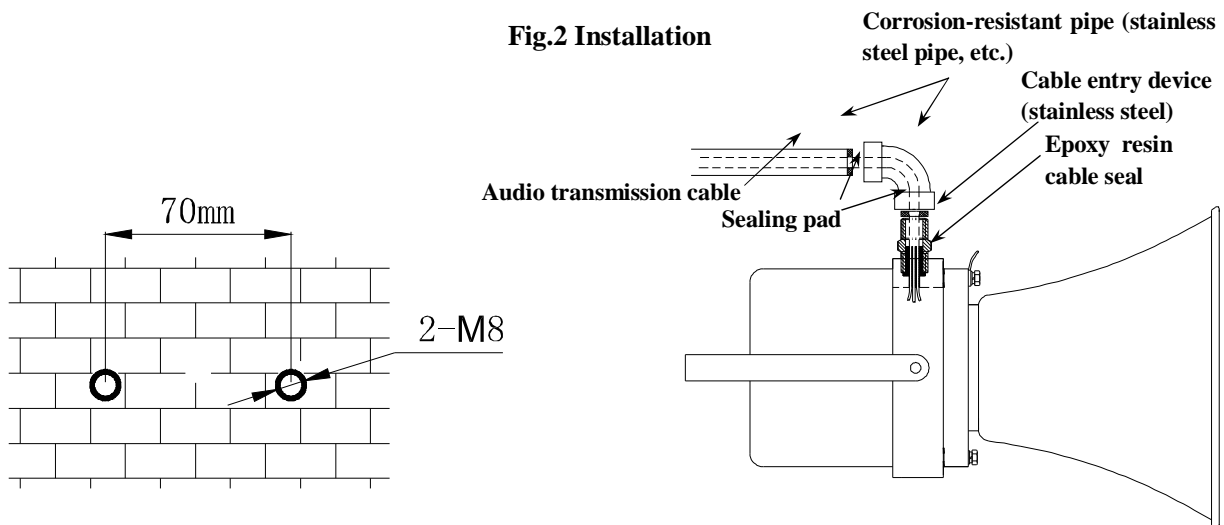
3.2 For dimensions, refer to the figures below. The weight is 7.2 kg.

Fig.1 Construction



4. Installation

- 4.1 Since the product has a weight of 7.2 kg, the product should be fixed to a solid position with two bolts with a diameter of 8 mm (see Fig. 2). Be sure that the bolts are tightened securely.
- 4.2 Tighten the cable entry device, and seal the loose cables at the horn cable entry by using epoxy resin with a length of not less than 20mm. Be sure that the sealing is tight and securely.
- 4.3 Loosen the securing nuts on both sides of the support so that the orientation of speaker is adjustable. Tighten the speaker on the bolts previously mounted, adjust the orientation of speaker, and retighten the securing nuts on the support.
- 4.4 Connect the red and white audio input cables of the speaker to the audio transmission cable inside the corrosion-resistant pipe, and securely ground the inner and outer yellow-green ground wires.
- 4.5 Connect the corrosion-resistant pipes with sealing pad between joints to ensure that the pipe connection from the horn cable entry to the audio source output terminal is airtight.



5. Use and Operation

5.1 Preparation and inspection before use:

- 5.1.1 Please read this manual carefully before use.
- 5.1.2 Check the nameplate of the product for conformity to the ratings, such as rated capacity and voltage.
- 5.1.3 Check the enclosure and components for any damage.
- 5.1.4 Check that the flameproof joint is not damaged or rusty, and that the gap of flameproof joint is less

than 0.15mm.

5.1.5 Check each fastener for any looseness, and retighten them.

5.1.6 Check that the cables are securely pressed and sealed.

5.2 Safety and protection before and during use

5.2.1 The speaker is a flameproof type and conforms to provisions specified by GB3836.1-2000 and GB3836.2-2000.

5.2.2 The casing should be securely grounded.

5.2.3 Never open the cover with the unit energized.

6. Troubleshooting

For troubleshooting, refer to Table 2.

Table 2 Troubleshooting

Fault	Possible cause	Remedial action	Remark
Abnormal or even no sound is generated.	1. Open circuit may exist. 2. The transformer may be defective. 3. The horn may be defective.	1. Replace the wire. 2. Replace the transformer. 3. Replace the horn.	
The casing is damaged.	The casing may be hit by force.	Replace the damaged component.	

7. Installation of Protection Devices and Accident Countermeasures

7.1 Installation of protection devices and precautions: The enclosure should be securely grounded, and the grounding resistance tested after installation should be less than 0.7Ω .

7.2 Accident countermeasures

In case of failure, turn off the unit in normal order. Identify the cause, and replace the defective component or return the unit to DSPPA for repair.

8. Service and Maintenance

8.1 Regular service and maintenance

Periodically remove the dirt on the unit, and frequently check the flameproof joint. In case of rusty flameproof joint, poor electrical contact or seriously reduced insulation resistance, repair as soon as possible.

8.2 Service and maintenance during use

Always avoid water from entering the casing during use, and timely remove dust accumulated on the casing to ensure good heat sinking effect of the speaker.

8.3 Period of maintenance

Once or twice each month.

8.4 Normal maintenance procedure

8.4.1 Check the bolts, flat washers, spring washers and nuts securing the flameproof joint for any looseness.

8.4.2 Remove dust and rust accumulated on the flameproof joint, and apply anti-rust grease on each flameproof joint. Check that the gap of the flameproof joint is equal to or less than 0.15 mm. If not, repair or replace the flameproof joint.

8.4.3 Check that the hold-down bolts of cable entry device are tightened, and that the epoxy resin sealing is in good conditions.

8.4.4 Check that the inner and outer ground wires are securely grounded.

8.4.5 Check the terminals for any abnormal heating and looseness. Check that the electrical connection is in good conditions.

8.4.6 Check that the insulation resistance of casing is normal.

8.4.7 Never check or move the unit with the unit energized.

8.5 Service and maintenance for long-term storage

For long-term storage, proper insulation, moisture-proof and flameproof rust-proof measures should be taken for the product. To use the product after long-term storage, check the electrical performance of product before use.

9. Handling and Storage

9.1 Handling precautions:

During handling of the product, proper measures should be taken to avoid entry of rain or snow, and no strong vibration or impact should be applied to the product.

9.2 Storage conditions and precautions:

The product should be stored at a well ventilated place which should not be exposed to rain, direct sunlight, corrosive gas or gas that will damage the insulation.

10 Unpacking and Inspection

10.1 Please check the product upon receipt of the product. **Note: Special attention should be taken to the flameproof joint. Check the flameproof joint for any damage or rust.**

10.2 Inspection items:

10.2.1 Check the nameplate data for conformity to the data, such as model, rated capacity and input voltage, which are specified in the purchase contract.

10.2.2 Check that all manufacturer's documents are provided.

10.2.3 Check whether the contents of package are as listed in the packing list.

10.2.4 Check that each component is not damaged or deviated, and that each fastener is tightened.

10.2.5 Check that each flameproof joint is not damaged, and that its gap is normal.

11. Miscellaneous

11.1 Quality assurance, after-sales service and contact

DSPPA will take responsibility for repair of failure due to quality problem in no charge, provided that the product is handled, stored, installed and used normally within 6 months after put into use or within 12 months after shipment, whichever is earlier.

In case of failure due to quality problem, please call DSPPA's After-sales Dept. at 020-86163230-602.

11.2 Ordering

Please specify the product name, model, quantity, capacity, input voltage, special requirements (if any) and the like when ordering.

DSPPA Acoustic Technology Co., Ltd.

Add: No. 1, Xiahe Rd., Jianggao Town, Baiyun Dist., Guangzhou, P.R.China

Tel: 020-86163230

020-86163230-602 (After-sales Dept.)

Fax: 020-86160766

P.O. Box: 510450

[Http://www.dsppa.com](http://www.dsppa.com)

Version I July 2008