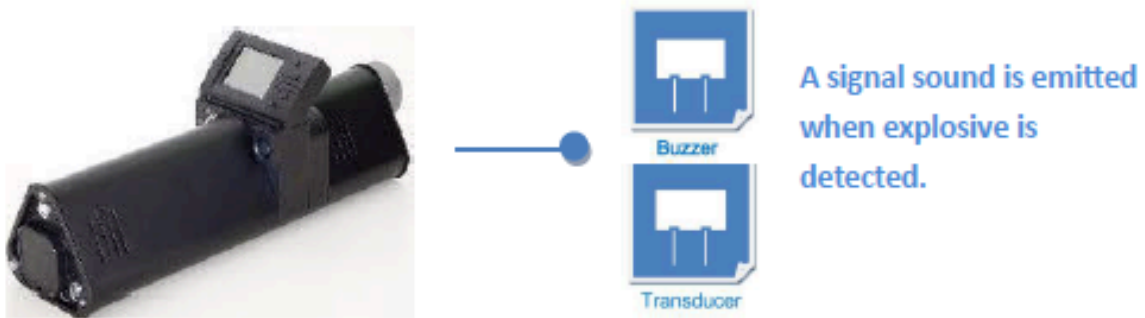


Applications guides | Explosive Detection for the acoustic components



Explosive detection is a non-destructive inspection process to determine whether a container contains explosive material. Explosive detection is commonly used at airports, ports and for border control.

Several types of machines have been developed to detect trace signatures for various explosive materials. The most common technology for this application, as seen in US airports, is ion mobility spectrometry (IMS). This method is similar to mass spectrometry (MS), where molecules are ionized and then moved in an electric field in a vacuum, except that IMS operates at atmospheric pressure. The time that it takes for an ion, in IMS, to move a specified distance in an electric field is indicative of that ion's size to charge ratio: ions with a larger cross section will collide with more gas at atmospheric pressure and will therefore be slower.



| Suggested Item | UDB | TDB | DB-E328 |
|----------------------------|------------|------------|--------------|
| Size (mm) | ∅ 12 x 7.5 | ∅ 12 x 9.5 | ∅ 13.8 x 7.5 |
| Sound Pressure Level (dBA) | 83 | 85 | 80 |
| Product Type | Magnetic | Magnetic | Piezo |
| Type | Pin | Pin | Pin |



| Suggested Item | DBX | DB-E1108 | DB-E658 | DB-E2338 | DB-E538 |
|----------------------------|----------|--------------|------------|--------------|--------------|
| Size (mm) | ∅ 12 x 9 | ∅ 12.6 x 6.3 | ∅ 14 x 6.7 | ∅ 13.8 x 6.4 | ∅ 16.5 x 6.7 |
| Sound Pressure Level (dBA) | 85 | 80 | 80 | 85 | 75 |
| Product Type | Magnetic | Piezo | Piezo | Piezo | Piezo |
| Type | Pin | Pin | Pin | Pin | Pin |