

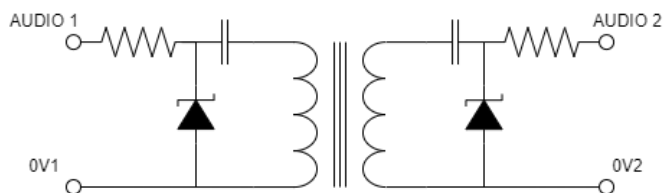
# VIA Audio Isolation Barrier Module

ANZ Ex 08.3021X [Ex ia] I

## 1. Description

The VIA Audio Isolation Barrier Module is an intrinsically safe voice communication audio isolation barrier. An audio isolation transformer, zener diode voltage clamps, DC decoupling capacitors and current limiting series resistors provide the isolation.

The apparatus is primarily designed for the isolation of two intrinsically safe audio circuits. It is also used to provide a passive interface and DC isolation between the Ampcontrol Voice Communications Controller (VCA) and a communication system.



## 2. Features

- Slim Line DIN Rail mount enclosure
- Approved to [Ex ia] Intrinsically Safe Standards for use in Group I Zone 0 hazardous areas.
- Isolation of two intrinsically safe audio circuits.

## 3. Installation

Screw terminals are located on opposite sides of the enclosure. The circuit is symmetric, which means that both terminals serve as inputs and outputs.



## 4. Specifications

### I.S. Parameters

It is a condition of safe use that the barrier shall be installed and used as per the Certificate of Conformity.

The following parameters must be strictly adhered to when installing the VIA module.

**Input:**  $U_i = 30\text{ V}$   
 $U_m = 30\text{ V}$

**Output:**  $U_o = 12.6\text{ V}$   
 $I_o = 97.5\text{ mA}$   
 $C_o = 30\text{ }\mu\text{F}$   
 $L_o = 49\text{ mH}$   
 $L_o/R_o = 1.52\text{ mH}/\text{ohm}$

### Enclosure Dimensions

(H x W x D): 74 mm x 23 mm x 100 mm

## 5. Part Number/s

121100 VIA - Audio Isolation Module

## 6. Application

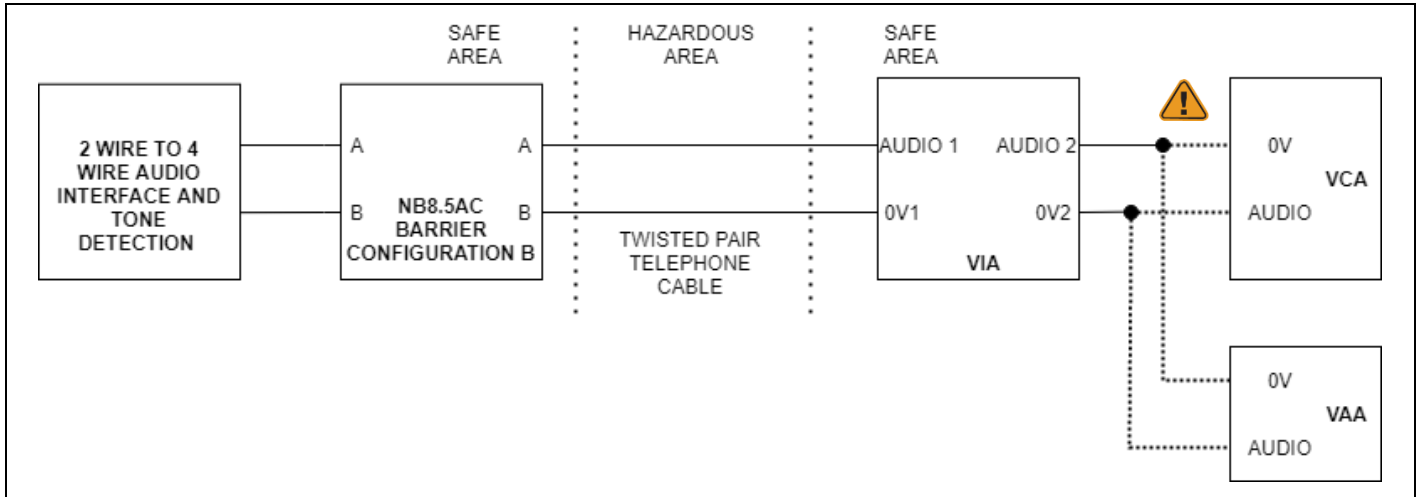
The VIA – Audio Isolation Barrier Module can be used in various applications.

### Connection to communication System.

The VIA – Audio Isolation Barrier Module can be used to interface VoiceCom audio to a communication system. See the typical diagram below.

Single pair twisted telephone cable should be used for the audio connections. A suitable barrier must be used between the communications system and the cable entering the hazardous area.

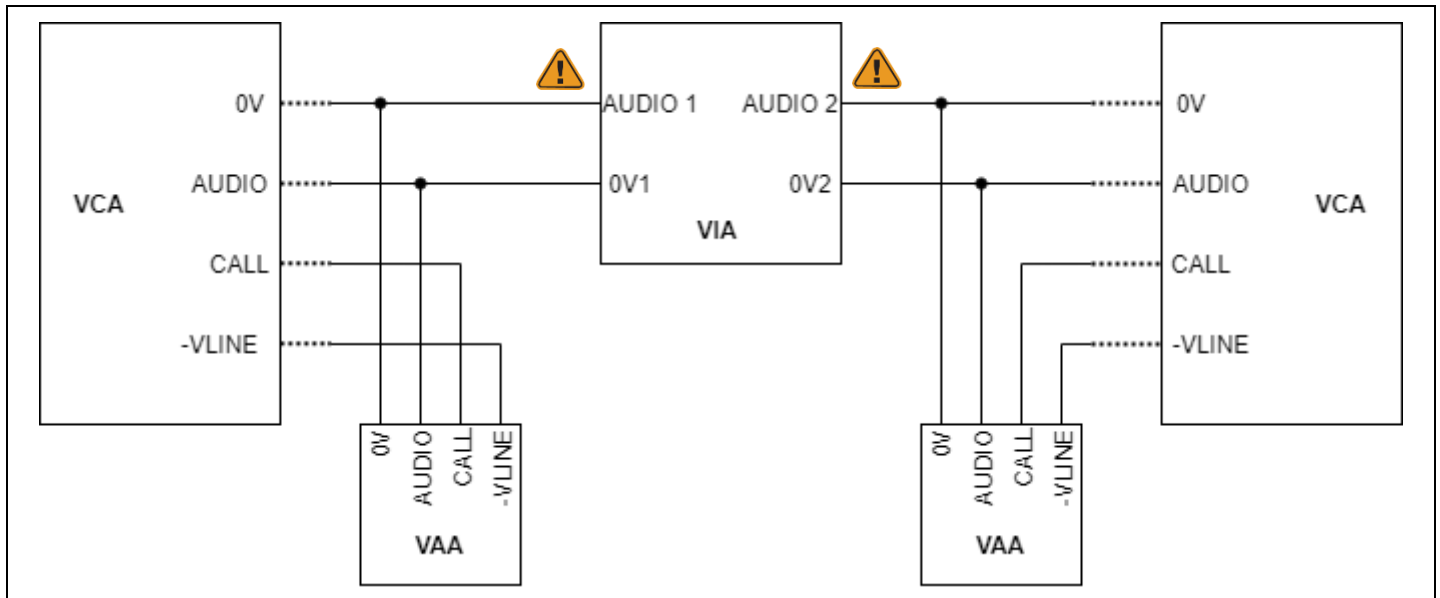
Typical connection diagram for surface audio



### Interconnect VoiceCom Systems

The Module is designed for the isolation of two intrinsically safe audio circuits. It can be utilised to connect two independent VoiceCom Systems. This configuration allows audio communication between the two systems while keeping the digital control and signalling systems independent.

Connection diagram for connection of VoiceCom systems



Take care to note the polarity of connections between the VIA and VCA/VAA.  
It should match the drawings above.

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