ISI – INTRINSICALLY SAFE INDICATOR

Description
The Ampcontrol Intrinsically Safe Indicator (ISI) is an intrinsically safe audio-visual alarm. The ISI is equipped with sirens and an array of LEDs that provide 180 degrees of visual indication. The ISI can be wired to operate with the LEDs and sirens operating (Audio Visual Mode), the LEDs only (Visual Only Mode), or sirens only (Audio Only Mode).

A condition of the certification for the ISI is that it is mounted on an enclosure that has an ingress protection rating of no less than IP54.

Application
There are two models of ISI available, for two different types of installation. The first model is used as a “ringing” device for the Ampcontrol Voicecom Telephone System, and the second model is a general audio-visual alarm (requires a FIM module).

The Voicecom Telephone ISI is connected to the same line as the Voicecom Telephones. When the voltage on the telephone line reverses, indicating a ringing phone, the ISI will provide an audible and visual alert to personnel in the area.

The Stand-Alone ISI provides a versatile audio-visual alarm. The Stand-Alone ISI must be used with a 380mW FIM Module in series to limit the available supply power. The Stand-Alone ISI will then provide an audible and visual alert when energised.

Key Features:
- IEC 60079 Certification
- 180 Degree Range of Visual Indication
- Two Sirens for Audible Indication
- Three Modes of Operation: Audio Visual Mode, Visual Only Mode & Audio Only Mode
- Broad Range of Applications (Model Dependant)

Typical Voicecom Telephone ISI Connection Diagram (Audio Visual Mode)

Typical Stand-Alone ISI Connection Diagram (Audio Visual Mode)
### SPECIFICATIONS

#### General
- **Supply Voltage**: 7 - 30Vdc
- **Temperature Range**: -20°C - 60°C
- **IP Rating**: To be mounted on an enclosure of IP54 minimum
- **Dimensions**: 45 x 105 x 62mm (excluding M12 mounting bolt, see above drawing)
- **Certification**: IECEx MSC 14.0019X

#### I.S. Parameters
- **Ui**: 30V
- **Ii**: 200mA
- **Pi**: 1.3W
- **Ci**: Negligible
- **Li**: Negligible

#### Installation Requirements
- **Mounting Bolt Size**: M12
- **Mounting Thread Length**: 23mm
- **Mounting Hole Size**: ø14mm
- **Enclosure Requirement**: IP54 minimum
- **Maximum Tightening Torque**: 5Nm

#### Additional Requirements
- The ISI is supplied with a silicone gasket that must be installed flush with the base of the ISI unit. This is a condition of the certification.
- When installed as a stand-alone unit, the ISI must be installed with a FIM. This is necessary to limit the available power to the ISI to meet the certification requirements. The FIM is not required for Voicecom Phone installations.

#### Installation Tips
- During the tightening of the mounting bolt, the ISI may twist on the silicone gasket. In order to prevent this twisting, it is recommended that the ISI be secured in place with a clear set silicone adhesive.

### Wiring & Modes
- **Audio Visual Mode**: Positive of the supply to white wire, negative of supply to black wire
- **Audio Only Mode**: Positive of the supply to red wire, negative of supply to black wire
- **Visual Only Mode**: Positive of the supply to blue wire, negative of supply to black wire

### Service & Disposal
- **Service**: The ISI has no serviceable parts. Wipe clean using an anti-static cloth.
- **Disposal**: To ensure that the unit is disposed correctly, return to Ampcontrol at end of life.

### Ordering Part Number
- 173203: Voicecom Telephone ISI Audio Visual Alarm Module
- 173569: Stand-Alone ISI Audio Visual Alarm Module
- 142406: FIM – Field Interface Module 100mA (380mW)

### Ampcontrol Contact Details
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