

IRB Intrinsically Safe Relay

IECEX TSA 07.0023X Ex ia I

1. Description

Ampcontrol's IRB Intrinsically Safe Relay is designed to switch non-intrinsically safe circuits from an approved intrinsically safe system. It can also be used to switch between two intrinsically safe systems.

The IRB Intrinsically Safe Relay is DIN rail mounted with the enclosure being fully encapsulated.

1.1kV Isolation is provided between the IS and Non-IS circuits by a reed relay.

A non replaceable fuse and three gas tubes provide protection to the relay in the event of a fault occurring external to the relay such as trailing cable damage.

A schematic diagram and terminal connections are shown on page 2.

The IRB Relay is typically powered from a 12VDC IS Power Supply.

2. Features

- DIN Rail or foot mount
- 1.1kV Isolation
- Encapsulated components
- Designed and tested to AS/NZS 60079.11:2000

3. Application

A typical application for the relay would be the isolation of power from a mining machine where gas monitoring systems currently supplied by Ampcontrol and other manufacturers have been installed.

When gas levels exceed a preset value the IRB Relay would open circuit the pilot in the supply cable from the substation or distribution box, which in turn would de-energise an Earth Continuity Relay, and the control circuit of the supply.

The IRB Relay is to be located within a safe area whilst the intrinsically safe gas monitoring system is normally located in the hazardous area. In this arrangement the safe area is usually the flameproof enclosure mounted on the machine.

The relay is designed to suit applications up to 1.1kV systems, therefore the relay is suitable for many and varied applications.



4. Specification

Supply Volts:

16.5VDC Maximum

Relay:

Relay energises at $\geq 10V$
Relay de-energises at $< 4V$

Service Temperature:

0 – 60 °C

Contacts:

1 N/O 1.6A, 90V Maximum

Isolation:

1100VAC

Dimensions:

75H x 99.7W x 110D mm

5. Part Number

101573 IRB 12VDC IS Relay

AMPCONTROL ELECTRONICS

Ampcontrol CSM Pty Ltd ABN 35 000 770 141
7 Billbrooke Close CAMERON PARK NSW 2285

Phone: (02) 4903 4800

Fax: (02) 4903 4888

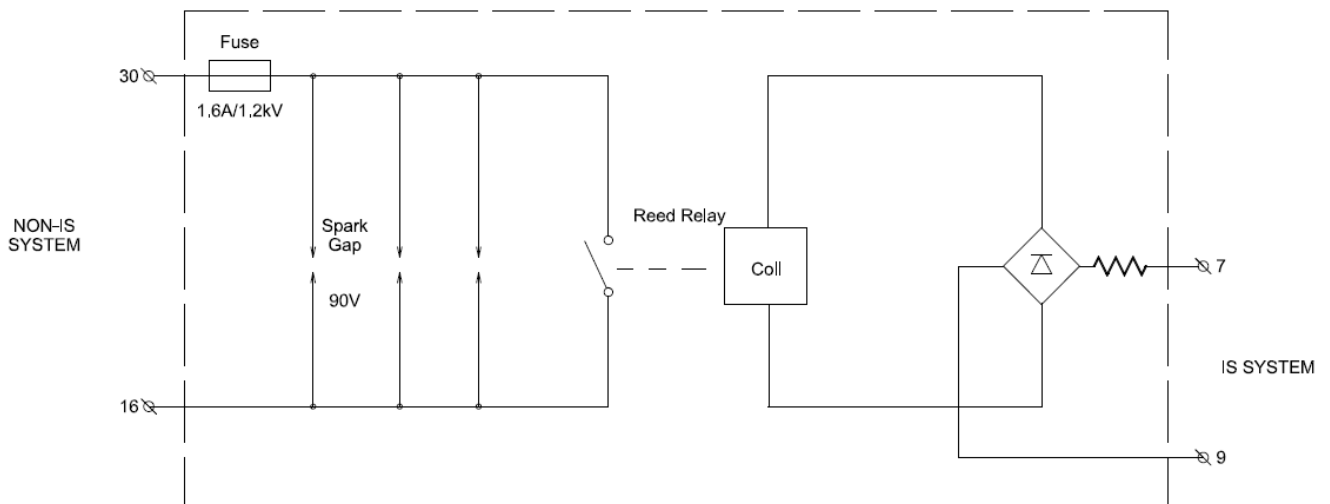
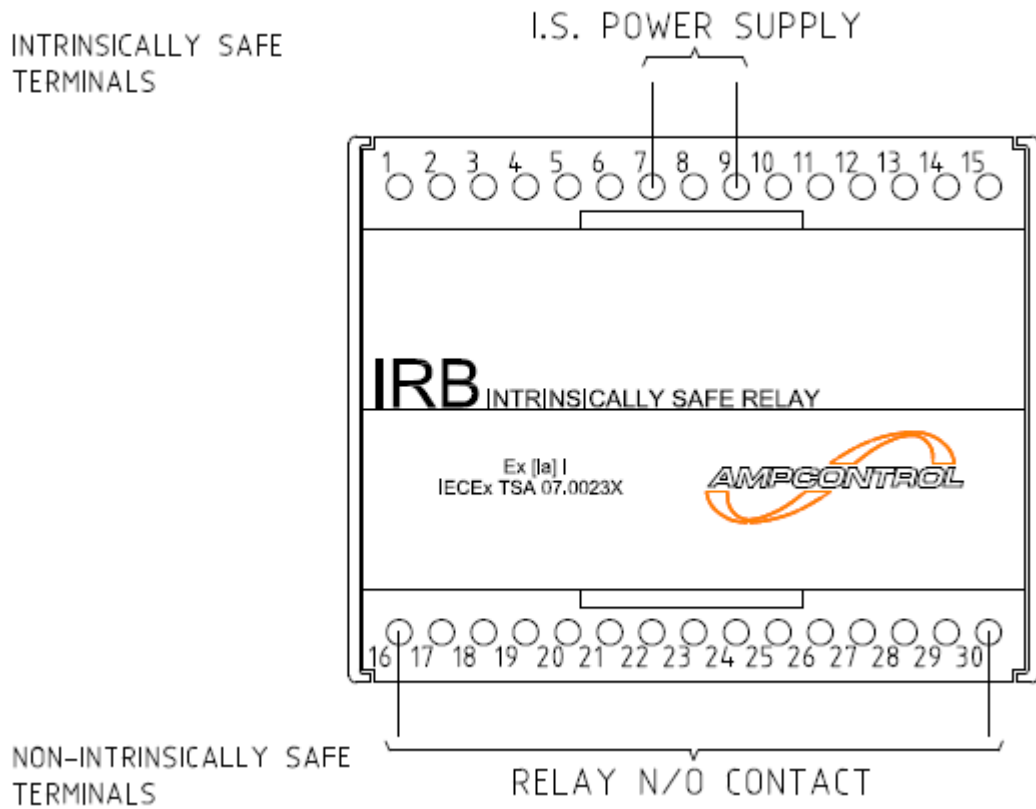
E-mail: electronicsorders@ampcontrolgroup.com

Web site: www.ampcontrolgroup.com

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www.ampcontrolgroup.com

Relay Connections and Schematic Diagram



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