

C Series
Dual Channel Switch Input
Relay Output Isolated Safety Barrier

≥ 3000 V AC (intrinsically safe side / non-intrinsically safe side)
≥ 1500 V AC (non-intrinsically safe)

The diagram illustrates the internal structure of the DIN Rai module, divided into a **Hazardous area** (blue background) and a **Safe area** (white background).

Hazardous area: Contains two input channels, **Input1** and **Input2**. Each input consists of a 10 kΩ resistor in series with a 0.5–2 kΩ variable resistor, connected to a diode symbol. The outputs of these inputs are labeled -1, +2, -3, and +4.

Safe area: Contains two inverters (triangles) and two relays. The inverters are connected to the hazardous area inputs. The relays are connected to the hazardous area outputs. The relays have two sets of contacts: one set is connected to **Output1** (terminals 5 and 6) and **Output2** (terminals 7 and 8). The other set of contacts is connected to the **Power supply** (terminals 9+ and 10-).

At the bottom, the **DIN Rai** terminal block is shown with terminals R8, R7, R6, R5, R4, R3, R2, and R1. A note indicates that **R1** and **R3** are connected to **R1R3**.

The apparatus can convert the dry contact or NAMUR signals into delay signals, it reflects the apparatus status by the LED indicators on the front side.

The apparatus detects input current to protect the system.

Input current ≤ 80 μA, considers the line breakdown, the output relay de-energized;
80 μA < input current < 1.2 mA, considers the input is “0”;
2.1 mA < input current < 6 mA, considers the input is “1”;
Input current ≥ 6 mA, considers the input circuit is short-circuit, the output relay de-energized.

→ BUS Specification

BUS	Electrical Characteristics
Current	Max. 8 A
Voltage (UL/IEC)	1.6 kV
Operation temperature	-40 °C ~ +80 °C

→ Installation

- The apparatus can be installed on the DIN 35 mm standard rail which is corresponding to DIN IEC 60715. The must be snapped onto the rail, and never slanted or tipped to the side.
- Installation and disassembly steps are shown in following figures:

Figure A

Figure B

A. Snap the BUS socket on the DIN 35 rail, as figure A;

B. Snap metal lock onto mounting rail, then rotate the safety barrier, as figure B, press down the safety barrier onto mounting rail, make sure that the BUS connector pins of safety barrier and BUS socket are in close contact.

C. Pry the metal lock off the rail with screwdriver as arrow shown, pull downward the springs, and rotate the safety barrier.

- D. Remove the safety barrier as arrow shows.
- As far as possible to mount it vertically, In order to dissipation the heat of the apparatus.
 - As far as possible to mount it vertically, In order to dissipation the heat of the apparatus.

Vertically installation

→ Light indication

- PWR: Power indicator light shows green, it means work normally.
- OUT1、OUT2: Bi-color LED
Red LED flashing: Input short-circuit or linebreakage;
Yellow LED ON: The relay is energized;
Yellow LED OFF: The relay is de-energized.

→ Attention

- Isolated Safety Barriers degree of protection is IP 20 and must be protected from undesirable ambient conditions (waterproofing, small foreign objects). It is suitable for installation in the control room or high density field cabinet, DIN 35 mm installation is convenient for installation and displacement.
- The devices were designed for use in pollution degree 2 and overvoltage category III as per IEC/EN 60664-1. If used in areas with higher pollution degree, the devices need to be protected accordingly.
- Installation position shall not be affected by strong mechanical vibration; impact and electromagnetic induction from signal terminal and power supply, should conformity with the requirements on electromagnetic interference resistance of products in Class 3 industrial field atmosphere stipulated in IEC 61000-4; the atmosphere shall be free from gases that are corrosive to metal and plastic components.

- The apparatus must be installed, connected and adjusted by qualified personnel in non-hazardous area according with the instruction manual.
- The operator must strictly comply with the relevant local safety standards and guidelines.

→ Supplementary instructions

- Our company reserves the right to change the product information without prior notification to the user. If the contents of the description are different from website or sample, this description shall prevail.