

1 Summary

STS18-121 switch-input (single channel) isolation safety barrier, receives the switch input comes from danger zone, the safety barrier isolated output provides relay contact output in safety zone.

2 Technical Specifications:

Channel: Single channel.

Area of switch Zone 0, II C, T4-6 danger zone
Zone 1, Group A, Danger zone

Danger zone signal input: Apply to switch, dry contact input
Supply voltage: 7.0-9.0V (Open Circuit)
Short current: 8mA

Safety zone relay output features: Respond time: $\leq 20\text{ms}$.
Contact power: 250VAC,2A; 40VDC,2A.

Input and output features: Input open, output relay close, yellow light on.
Input close, output relay open, yellow light off.

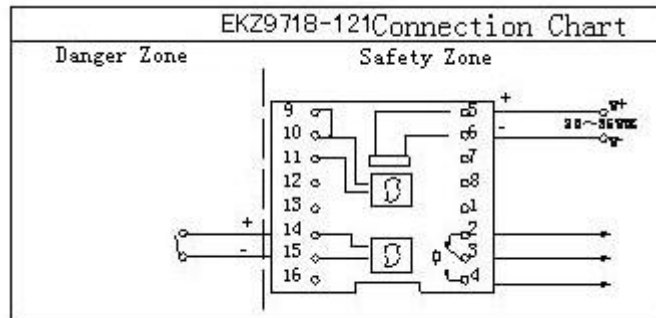
LED display Green: Source indication
Yellow: Path state (Turn on when output is energized).

Source: 20~35VDC.

Power consumption: 24V,35mA.

Safety Specifications: $U_o=8.61\text{V}, I_o=9.8\text{mA}, P_o=21.1\text{mW}, C_o=5.9\mu\text{F}, L_o=150\text{mH}$

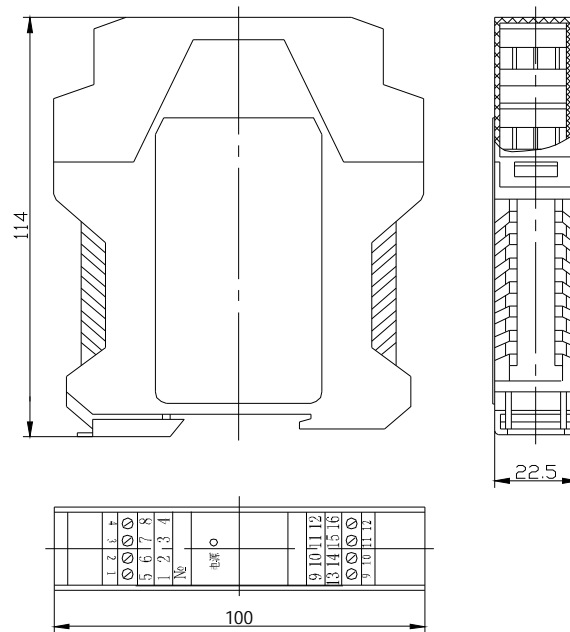
3 Signal Connections



5 STS18-121 Terminal Functions

Terminal Number	Terminal Function	
Safety Zone (Yellow)	5	Power (+)
	6	Power (-)
	3	Relay Output
	4	Relay Output
Danger Zone (Blue)	14	Input Signal (+)
	15	Input Signal (-)

6 Dimensions



STS Series isolate barrier size chart

7 Installations

7.1 Guideway: Isolate barrier is installed on the standard international generic M35 Guideway.

7.2 Terminal lead: The cross-sectional area of soft copper wires which connect to field must be greater than 0.5mm². The insulation strength of connecting wires must be greater than 1500V.

7.3 Installation notes

- a) Isolate barrier should be put in a safe place to ensure the cleaning and no corrosive gas.
- b) The circuit wiring of intrinsic ends (blue) and non-intrinsic ends (yellow) of the isolate barrier is prohibited from wrong and confusion. The intrinsic safe leads should use the blue as the marking; intrinsic leads and non-intrinsic leads should be installed separately in the leads slot, and use different casing tubes. The intrinsic safety side of isolate barrier is not allowed to have a mixture of other power, including other power supply with intrinsic safety current.
- c) When the isolate barriers are with concentrated layout, it should make the intrinsic side adjacent with the intrinsic side and non-intrinsic side adjacent with the non-intrinsic side to avoid the confusion.
- d) On the separate power supply debugging of isolate barrier, it is important to pay attention to the model, power polarity, voltage grading and connector tab on the shell of isolate barriers.
- e) It is forbidden to test the insulation between the terminals of isolate barrier with insulation ohmmeter, to check the insulation of the system lines, it should disconnect all isolate barriers at first, otherwise it would cause the fuse of internal instant fuse.
- f) If the internal module of isolate barrier is damaged and needs replacement, it is needed to return to the factory for repairing. The repaired isolate barriers should have a comprehensive re-examination before being put into operation.
- g) The installation, use and maintenance of isolate barrier should strictly abide by the relevant contents of GB3836.15-2000 “Part 15 of Explosive Gas Electrical Equipment: Dangerous place electrical installation (except mine)”, GB50058-1992 “Electrical Equipment design code of Explosion and Fire Risk Environment” and product brochures.

8 Package and Storage

8.1 Isolate barriers should be packed with transparent plastic bags and put in the special packing boxes.

8.2 Isolate barriers should be stored in a ventilation indoor environment with ambient temperature of 5-40°C and relative humidity less than 85%, and without corrosive gases in the air.

8.3 Attachment

A copy of product brochure

A copy of product certification

9 Warranty

The normal product warranty period is 18 months, the damage caused by improper use is not within the scope of warranty.