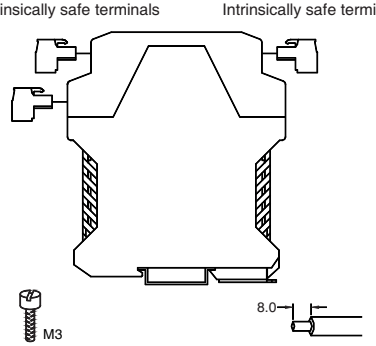
Connections

(1) This barrier adopts knock-down connector with screw terminals. The intrinsically safe(is for short) terminals (blue plugs) should be connected to hazardous area devices and the non-is ones(green plugs) to the safe area devices.

(2) Choose for the harzardous area the blue-marked wires.Its minimum cross section area should be 0.5 mm^2,and minimum electrical strength should be 500V.

(3) The wirings in safe area and hazardous area must be separated,and both have protection bushes.

(4) A length of 8mm bared wire is locked by the M3 bolt.See as shown below.



Installation

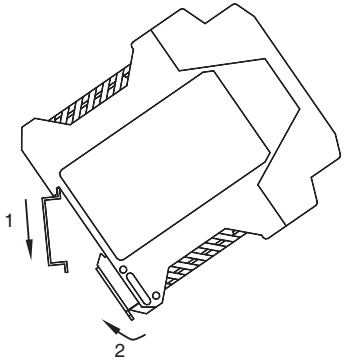
During installation,operation and maintenance,users shall comply with the relevant requirements of the product instruction manual,GB 50257-1996"code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering", GB 3836.13-2013"Electrical apparatus for explosive gas atmospheres Part 13:Repair and overhaul for apparatus used in explosive gas atmospheres",GB 3836.15-2000"Electrical apparatus for explosive gas atmospheres Part 15:Electrical installations in hazardous areas(other than mines)"and GB 3836.16-2006"Electrical apparatus for explosive gas atmospheres Part 16:Inspection and maintenance of electrical installation(other than mines)".

GS8000-EX isolated barrier are designed for mounting on 35mm DIN guide rail.

Installation according to the following steps:

(1). Make the upside of the barrier locked into the guide rail;

(2). Push the downside of the barrier in the rail.

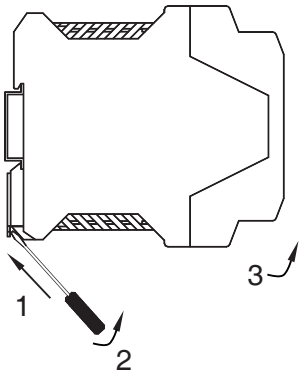


Disassembly

(1) Use a screwdriver (edge length≤6mm) insert the metal lock which at the downside of the isolator;

(2) Push the screwdriver upwards,and pull the metal lock downwards;

(3) Take out the isolator from the rail.



Maintenance

(1) Before using, please check again whether the module's EX-proof rating accords to the operating ambients,and also wiring and polarity are correct.

(2) It is disallowable to test insulativity among the terminals with a megameter. If necessary,the wires must be cut off before testing, or the internal fuse would blow.

(3) Every product has been tested strictly before delivery. If users find any abnormality,please contact the nearest agent or our company.

(4) In 5 years from the delivery date,if the product works improperly during normal operation,we will repair it for free.

SHANGHAI CHENZHU INSTRUMENT CO.,LTD.

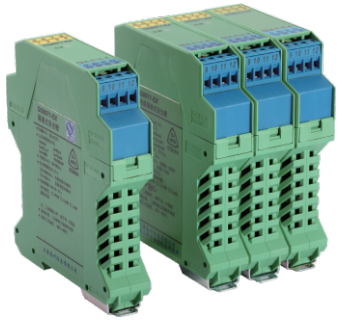
Add: Building 6, 201 Minyi Road, Caohejing Hi-Tech Park
Songjiang New Industrial Park, Shanghai 201612, P.R. China
Tel : +86-21-64513350 Fax : +86-21-64846984
Email：chenzhu@chenzhu-inst.com
http://www.chenzhu-inst.com

CHENZHU | User Manual

Isolated Barrier

GS8011-EX-AC
GS8012-EX-AC

GYB16.1743



XK06-014-00557 生产许可

5 YEARS WARRANTY

Please read the instruction manual carefully before use the product, and please safekeeping.

⚠ Caution

- Please check whether the product type on the package accords to the ordering contract;
- Read this manual carefully before installation or using. If there is anything unclear, please dial technic support hotline-400 881 0780;
- Isolated barrier should be located in the safe area;
- Supply voltage is 220VAC is forbidden;
- Users are not allowed to dismantle or repair the barrier otherwise it will induce malfunction.

CZ.GS8012-EX-AC.11(S)E-5.0/18.03

Summarize

Switch signal input & relay output Isolated barrier,can transfer the switch or proximity switch signal of hazardous area to safety area .This device has selectable line fault detect (LFD) indicating function and each channel of it can be setting output & input in-phase or anti-phase control mode.It need independent power supply and input channels are non-isolated.The power part,the input part and the output part are isolated from each other.

Specification

Number of channel: 1 (GS8011-EX-AC)
2 (GS8012-EX-AC)
Supply voltage: 170~250V AC
Current consumption: (at 220V supply,output energized)
⩽2VA(GS8011-EX-AC)
⩽3VA(GS8012-EX-AC)
Safe area output:
Response time: ⩽20ms
Drive ability: 250V AC,2A or 30V DC,2A
Load type: resistive load
Hazardous area input:
Input signal: switch,proximity detector
Open circuit voltage: about 8V
Short circuit current: about 8mA
Input/output characteristics(normal phase):
Switch closed/ Input loop- current＞2.1mA, output relay is energized yellow LED ON.
Switch open/ Input loop- current ＜1.2mA, output relay is de-energized yellow LED OFF.
Function of the conteol switch:

Sta.	K1(output1)	K2(output2)	K3
ON	Reverse		LFD disenable
OFF	In-phase		LFD enable

Note: A resistor of 10kΩ must be fitted when using the LFD facility with a contact input
Power supply protection: protect the product form reverse supply voltge destroy
Electromagnetic compatibility: accord with GB/T 18268(IEC 61326-1)
Dielectric strength:
Between non-intrinsically safe circuit and intrinsically safe⩾2500V AC
Between power supply and non-intrinsically safe circuit⩾500V AC
Insulation resistance:
Between non-intrinsically safe part and intrinsically safe part⩾100MΩ
Between power supply and non-intrinsically safe part⩾100MΩ
Weight: approx.100g(GS8011-EX-AC)
approx.150g(GS8012-EX-AC)
Suitable location:
mounting in safe area,and connected to the is apparatus in zone 0 hazardous area with IIA,IIB,IIC or T4~T6 hazardous gas.
Suitable apparatus:
Compliance with DIN19234 of NAMUR proximity switches,switches and other field equipment (including:intrinsically safe pressure switches, temperature switches,level switches,etc.)

Operation Conditions

(1).The air should not contain any medium corrupting the coat of chrome, nickel and silver. Moreover,violent quiver and impact or any cause of electromagnetic induction (such as big current or spark, etc.)must be avoided when using.
(2). Operating temperature: -20℃~+60℃
(3). Storage temperature: -40℃~+80℃
(4). Relative humidity: 10%~90%

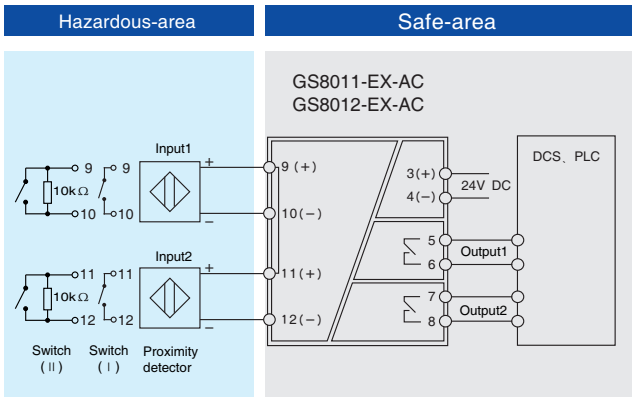
Intrinsic safety description

National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation(NEPSI)
Compliancy with standard: GB3836.1、GB3836.4 and GB3836.20
Ex-marking: [Ex ia Ga] IIC
Um=250V
Intrinsic safety parameter: (9,10;11,12 terminals)
Uo=10.5V, Io=14mA, Po=37mW
IIC：Co=2.4μF ， Lo=165mH
IIB：Co=16.8μF ， Lo=495mH
IIA：Co=75.0μF ， Lo=1000mH
(1) for distributed inductance and capacitance e.g. as in a cable, allow the values of capacitance and inductance;
(2) for circuits containing up to 1 % inductance or up to 1% capacitance with a cable,allow the values of capacitance and inductance;
(3) for connection of the combined inductance and capacitance where both are greater than 1% of the allowed value (excluding the cable), allow up to 50% each of the values of capacitance and inductance

Intrinsic safety explosion protection loop system

Special requirements have to be confirmed before using the intrinsically safe explosion loop system(intrinsically safe circuit) which connected by isolated barrier and intrinsically safe apparatus in field:
(1) The explosion level of intrinsically safe apparatus should meet the requirements of operation conditions. The apparatus should pass the explosion protection test and get the certificate by state-authorized explosion-proof product certification bodies.
(2) The intrinsic safety parameters of isolated barrier and intrinsically safe apparatus both are sure, and comply with 12.2.5 of GB 3836.15-2000.
(3) If any parameters are unclear, the system has to be confirmed by state-authorized explosion-proof product certification bodies.

Application



Note：GS8011-EX-AC contains only input1 and output1.

Outline dimensions

114.5mm×99.0mm×22.5mm