

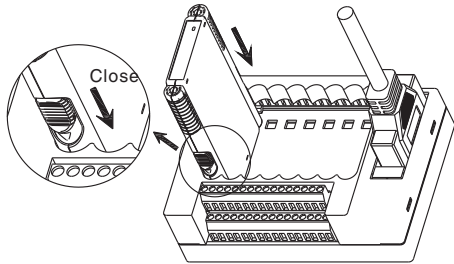
■ Installation

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)".

AM2000EX series isolated barriers are used in concert with AM2000EX series termination board, mounted on termination board. Install as follow:

(1). First make sure both sides of locks are under "Open", insert the instrument along the circular guide groove;

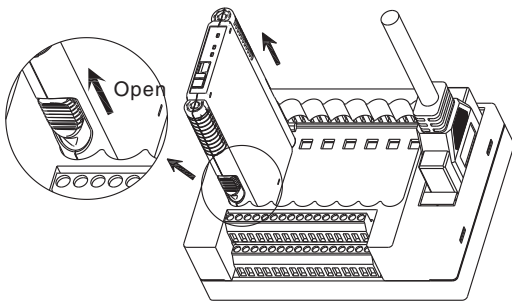
(2). After confirming the instrument is inserted in the end, tighten the lock down.



■ Disassembly

(1). Open up both sides of locks;

(2). Pull the instrument in the direction of the guide groove.



■ Maintenance

(1). Before using, please check again whether the module's Ex-proof rating accords to the operation conditions, 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 test strictly before leaving factory. If users find any abnormality in the module, 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 or replace it without payment.

Isolated Barrier

AM2012EX

GYB12.1279X



Entrust: Hangzhou Hollysys Automation Co., Ltd.
 Add: NO.19 street Economic & Technic Developing Zone, Hangzhou
 Post: 310018
 Tel: 0571-8163 3800
 Fax: 0571-8163 3700
 http: //www.hollysys.com

Producer: SHANGHAI CHENZHU INSTRUMENT CO., LTD.
 Add: Building 6, 201 Minyi Road, Caohejing Hi-Tech Park
 Songjiang New Industrial Park, Shanghai 201612, P.R. China
 Production license number: X06-014-00557



⚠ 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 something unclear, please dial technic support hotline;
- Isolated barrier should be located in the safe area;
- Supply voltage is 24VDC, 220VAC is forbidden;
- Users are not allowed to dismantle or repair the barrier otherwise it will induce malfunction.

Summarize

Digital signal input Isolated barrier,can transfer the switch or proximity switch signal from 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 reverse phase control mode.It need independent power supply.

Specification

Number of channels: 2

Supply voltage: 20~35V DC

Current consumption: (at 24Vdc supply,20mA output) ≤ 45mA

Safe area output relay signal:

Response time: ≤ 10ms

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:

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 switch setting:

Sta.	K1,K3	K2,K4
ON	Reverse	LFD enable
OFF	In-phase	LFD disable

Note: Switch(I),K2,K4 must be set to OFF state, no line fault (breakage, short circuit) detection; When using line fault (breakage, short circuit) detection function, resistors must be fitted, 22kΩ in parallel with switch, 680Ω in series with switch, see Switch (II), K2,K4 set to ON state.

Power supply protection: Protect the barrier form reverse supply voltage destroy

Electromagnetic compatibility: According to IEC 61326-1(GB/T 18268)

Dielectric strength:

Between non-intrinsically safe part and intrinsically safe part ≥ 2500VAC

Between power supply part and non-intrinsically safe part ≥ 500VAC

Insulation resistance:

Between non-intrinsically safe part and intrinsically safe part ≥ 100MΩ

Between power supply part and non-intrinsically safe part ≥ 100MΩ

Weight: Approx.100g

Suitable location: Mounting in non-hazardous area, and connected to the IS apparatus in zone 0 hazardous area.

Suitable IS 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°C~+60°C

(3). Storage temperature: -40°C~+80°C

(4). Relative humidity: 10%~90%

Intrinsic safety description

National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation(NEPSI)

Compliance with standard: GB3836.1、GB3836.4 and GB3836.20

Ex-marking: [Ex ia Ga] IIC

maximum voltage: Um=250V

Intrinsic safety parameter: (1,3;2,4 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

Largest external capacitance (Co) and inductance (Lo) numerical attention when using the following requirements:

(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

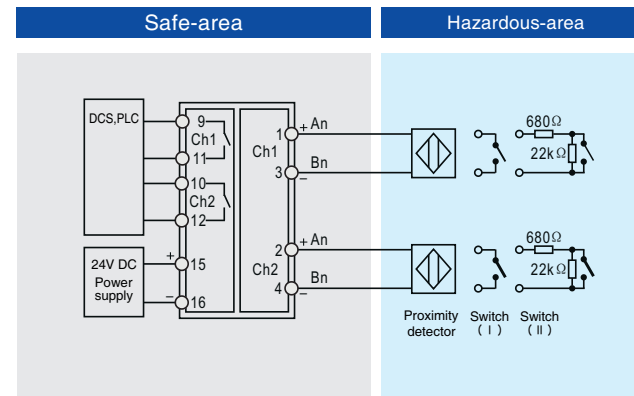
Special requirements have to be confirmed before using the intrinsically safe explosion loop system(intrinsically circuit) which connected by isolated barrier and intrinsically safe apparatus in field:

(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



Dimensions

110.0mm×73.0mm×12.5mm

