NPEXA-C711
Isolated Safety Barrier

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➔ Introductions

This isolated safety barrier converts the RS485 digital signals from a hazardous area into RS485 digital signals to a safe area by isolation, and also provides transmitters with power in the hazardous area.

The input, output, and power supply are galvanically isolated from each other.

➔ Parameters

Explosive-proof grade: [Ex ia Ga] IIC

Power supply:

Connection type: Terminals (14+, 15-)

Rated voltage: 18 V DC ~ 60 V DC

Input (1, 2):

Input signal: RS485 digital signal

Control mode: half-duplex

Distribution (3, 6):

Distribution setting: Refer to rotary switch setting

Voltage tolerance: ± 10%

Output (7, 8): RS485 digital signal

Transmission characteristics:

Transmission delay: ≤ 5 μs

Transmission rate: ≤ 56 kbps

Electromagnetic compatibility: Accordance to IEC 61326-3-1

Dielectric strength (1 mA leakage current, 1 minute test time):

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

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

Insulation resistance: ≥ 100 MΩ (Input /Output/Power supply)

Parameters certified by China National Quality Supervision and Test Centre for Explosion Protected Electrical Products (CQST):

U_m: 250 V

Terminals 1, 2:

U_o: 7.6 V I_o: 77 mA P_o: 147 mW C_o: 7 μF L_o: 6 mH

Terminals 3, 6:

U_o: 23.1 V I_o: 187 mA P_o: 1080 mW C_o: 0.1 μF

L_o: 0.34 mH

Ambient conditions:

Operation temperature: −20 ℃ ~ +60 ℃

Relative humidity: 10% RH ~ 90% RH (40 ℃)

Atmosphere pressure: 80 kPa ~ 106 kPa

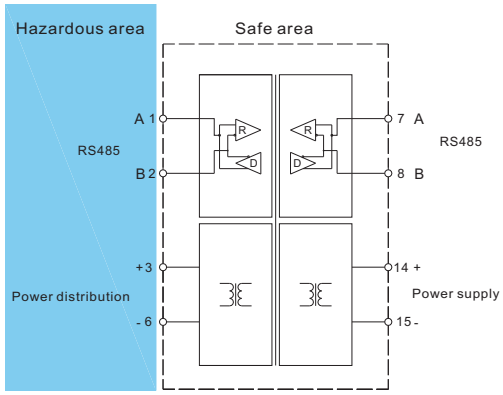
Storage temperature: −40 ℃ ~ +80 ℃

Power dissipation:

≤ 2 W (Distribution: 8 V/9 V/12 V, 50 mA)

≤ 3.5 W (Distribution: 5 V/6 V, 100 mA)

➔ Wiring diagram



❍ The transmission cable in the figure is recommended to use the shielded twisted pair.

➔ Power ON/OFF characteristics

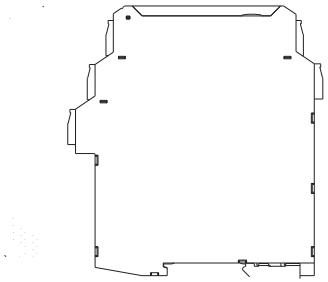
❍ When power ON or power OFF, the bus dose not generate error.

➔ Safe state

❍ When the Communication bus port is fault, e.g. open-circuit or short-circuits, the DUT lead to a safe state.

➔ Dimension

Width × Height × Depth: 17.8 mm × 110 mm × 117 mm



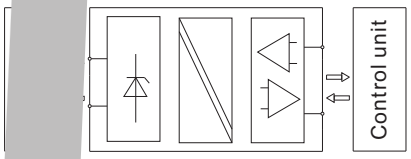
➔ Rotary switch setting

➔ Applications

This apparatus is used for transmitting signals between field devices and process control system. It can be used to connect field equipment which is installed in potentially explosive gas environment, and protect the intrinsically safe equipment in a hazardous area by limiting current and limiting voltage.

The apparatus can convert the RS485 digital signals from a hazardous area into RS485 digital signals to a safe area by isolation, and also provides transmitters with power in

the haz ea.



➔ Ins n

- The tus can be installed on the DIN 35 mm sta l which is corresponding to DIN IEC 60715. The e snapped onto the rail, and never slanted or tipp side.
- Ins and disassembly steps are shown in following fig

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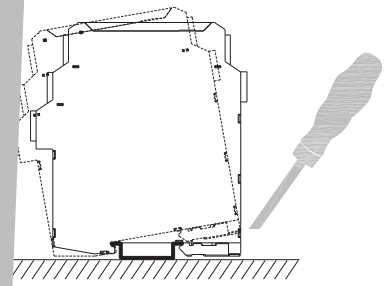
A. tal lock onto mounting rail, then rotate the safety ba figure A, press down the safety barrier onto mo il.



Vertically installation

➔ Light indication

- **PWR**: Power indicator light shows green, it means work normally.
- **TX (yellow)**: The indicator flashes while data sending and turns on when sending data fails. Otherwise, the indicator turns off when normal.
- **RX (green)**: The indicator flashes while data receiving and turns on when receiving data fails. Otherwise,the indicator turns off when normal.

e metal lock off the rail with screwdriver as arrow

contents of the description are different from website or sample, this description shall prevail.