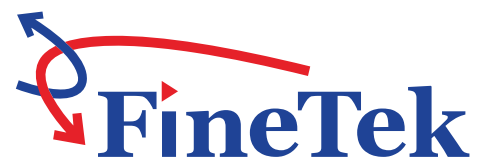




บริษัท ฟลูเทค จำกัด
Flu-tech co.,ltd
 Authorized Distributor in Thailand

Fluid Control Specialists

Safety Barrier



Innovation · Quality · Sharing

TX10 ISOLATED SAFETY BARRIER

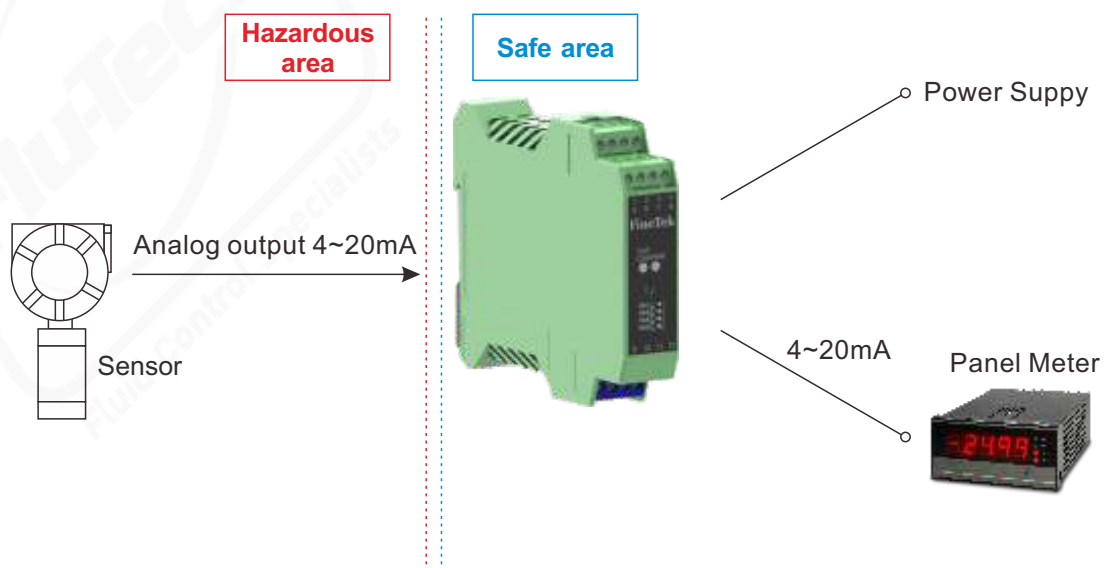
OPERATING PRINCIPLE

Isolated safety barrier provides power supply to transmitters located in hazardous zone and transmit isolated supply current signal to safe zone. Max. input 0~20mA which can be transformed to different analog outputs, such as 0~20mA / 4~20mA / 0~5V / 0~10V.


FEATURES

- 1 current input port to connect with continuous current or current output products. Applicable for use in hazardous zone.
- 3 output ports - relay output, current output, and RS-485.
- LED indicator, user friendly.
- DIP switch for function selection.
- In house programming per customers' criteria.
- Self-test function for system function monitoring.
- Setting relay output as alarm for optional external sensing unit connection.
- Optional RS-485 interface enables easy system configuration & supply current data retrieve.
 - * RS485(only for host communication) when multiple TX1 safety barriers operating parallelly, the max. quantity for parallel connection is 20 units.
- Product design complies with explosion proof standard.
- 2 dual-color LEDs
 - ▶ PWR LED: Green - Normal
Red - Abnormal
 - ▶ OUT/CHK LED: Yellow - Relay activated
Red (Flash) - Input current abnormal

SCHEMATIC DIAGRAM



TX10 SPECIFICATION

<p>Dimensions (Unit: mm)</p>		
<p>Certification</p>	 <p>NEPSI Ex-proof GYB14.1529 Ex ia Ga IIC Intrinsic safety GB3836.1-2010 GB3836.4-2010 \ GB3836.20-2010</p>	
<p>Model No.</p>	<p>TX100R</p>	<p>TX101F</p>
<p>Supply voltage</p>	<p>20~35 Vdc</p>	
<p>Power supply protection</p>	<p>Power supply reverse protection</p>	<p>Non-directionality input</p>
<p>Current consumption</p>	<p>< 100 mA @24 V, Load 20mA</p>	<p>< 200 mA @24 V, Load 20mA</p>
<p>Hazardous Zone</p>		
<p>Input</p>	<p>0~20/4~20</p>	
<p>Open loop supply voltage</p>	<p>< 28 Vdc</p>	
<p>Distribution supply voltage</p>	<p>> 15 Vdc (Load 20 mA)</p>	
<p>Safe Zone</p>		
<p>Output</p>	<p>Current: 0~20/4~20 mA Load resistance: <550 ohm or Voltage: 0~5/0~10V Load resistance: <20k ohm</p>	
<p>Response time</p>	<p>< 5 ms</p>	
<p>Accuracy</p>	<p>0.1 % F.S., 0.5% @ <0.3V (20°C)</p>	
<p>Temp. coefficient</p>	<p>< 2.0μA/°C (25°C~60°C); < 3.0μA/°C (-20°C~25°C)</p>	
<p>Isolation</p>	<p>2500Vac : Current leakage < 1mA : 1min. 1. Intrinsic end & Non-Intrinsic end 2. Non-Intrinsic end power supply & output</p>	
<p>Ambient temp.</p>	<p>-20~60 °C</p>	
<p>Applicable zone</p>	<p>Zone 0, Zone 1, Zone 2, IIA, IIB, IIC T4~T6</p>	
<p>External equipments</p>	<p>1. 2-Wire transmitter 2. 3-Wire transmitter 3. Current output transmitter</p>	

INTRINSICAL SAFETY PARAMETERS

Transmitter (2 wire type)

Max. Voltage input U _i (V)	Max. Current input I _i (mA)	Max.Power input P _i (mW)	Max. internal equivalent parameter	
			C _i (μF)	L _i (mH)
20	120	—	0	0
Max. Voltage output U _o (V)	Max. Current output I _o (mA)	Max.Power output P _o (mW)	Max. external parameter	
			C _o (μF)	L _o (mH)
5.355	—	—	See below table	
Gas group	Max. External parameter			
	C _o (μF)		L _o (mH)	
II C	65		—	
II B	1000		—	
II A	1000		—	

Transmitter (3 wire type)

Max. Voltage output U _o (V)	Max. Current output I _o (mA)	Max.Power output P _o (mW)	Max. internal equivalent parameter	
			C _i (nF)	L _i (μH)
28	93	651	0	0
Gas group	Max. External parameter			
	C _o (μF)		L _o (mH)	
II C	0.083		4.2	
II B	0.65		12.6	
II A	2.15		33.6	

FUNCTION SETTING

Current Mode

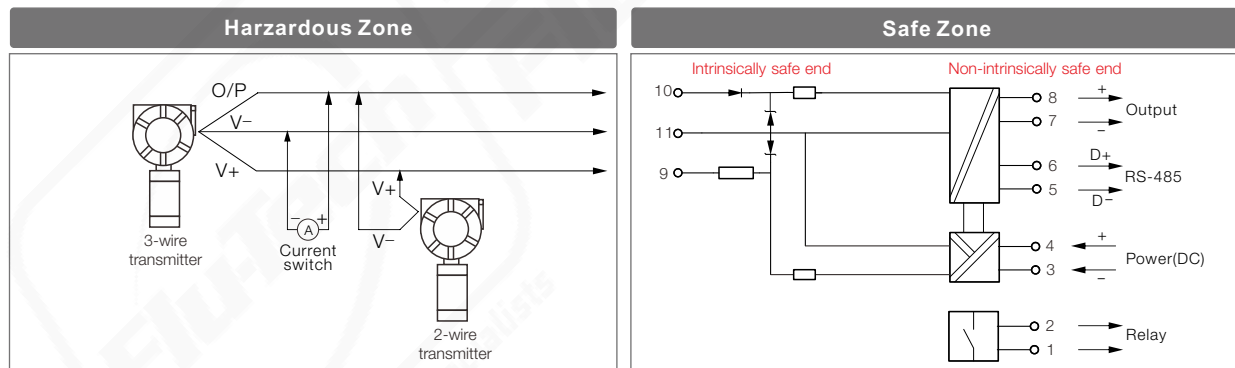
DIP	Action mode	Description	DIP switch position
SW1	Working mode	Continous current output	I
SW2	Analog output mode	Increment : 0~20mA/4~20mA/0~5V/0~10V	I
		Decrement 20~0mA/20~4mA/5~0V/10~0V	II
SW3	Relay action	ON, as value setted	I
		ON, as value setted	II
SW4	Relay output mode	Boot mode	I
		Alarm mode	II

Switch Mode

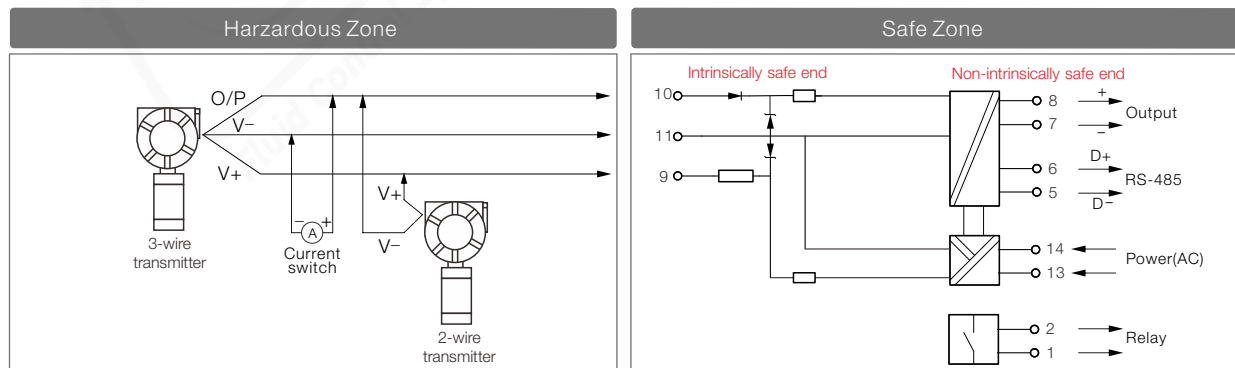
DIP	Action mode	Description	DIP switch position
SW1	Working mode	Current output for switch	II
SW2	Relay action	ON, as \geq value setted	I
		ON, as \leq value setted	II
SW3	Delay time setting	NO time delay	I
		5 second delay	II
SW4	Relay output mode	Boot mode	I
		Alarm mode	II

WIRING

TX100R



TX101F



MODEL NUMBER / ORDER CODE COMPARISON TABLE

ORDERING INFORMATION

Model Number	Order Code
TX100R	TXX1017BB
TX101F	TXX1007BC

TXX 1 ⑤ ⑥ ⑦ ⑧ - ⑨ ⑩ ⑪ ⑫ ⑬

⑤ ⑥ **Model**

- 00: Standard(W45.2×H113.6×D99)
- 01: Economic(W22.6×H113.6×D99)

⑦ ⑧ **Certification**

- 00: None
- 7B: NEPSI-Exia

⑨ **Power supply**

- B: DC 20~35 Vdc
- C: AC 20~250 Vac

⑩ **Input**

- A: 4~20mA
- B: 0~20mA

⑪ **Output 1**

- A: 4~20 mA
- B: 0~20 mA
- C: 0~5 V
- D: 0~10 V

⑫ **Output 2**

- 0: None
- A: RS485

⑬ **Output 3**

- 0: None
- C: Relay