



08-TR1XX-B1-EM,07/16/2012

TR11/12 SERIES TEMPERATURE TRANSMITTER OPERATION MANUAL



Thank you for purchasing this Fine-Tek product. Please read the user's manual first and be familiar with the product performance and each function before use. Please keep the user's manual for reference in future.

Warning!

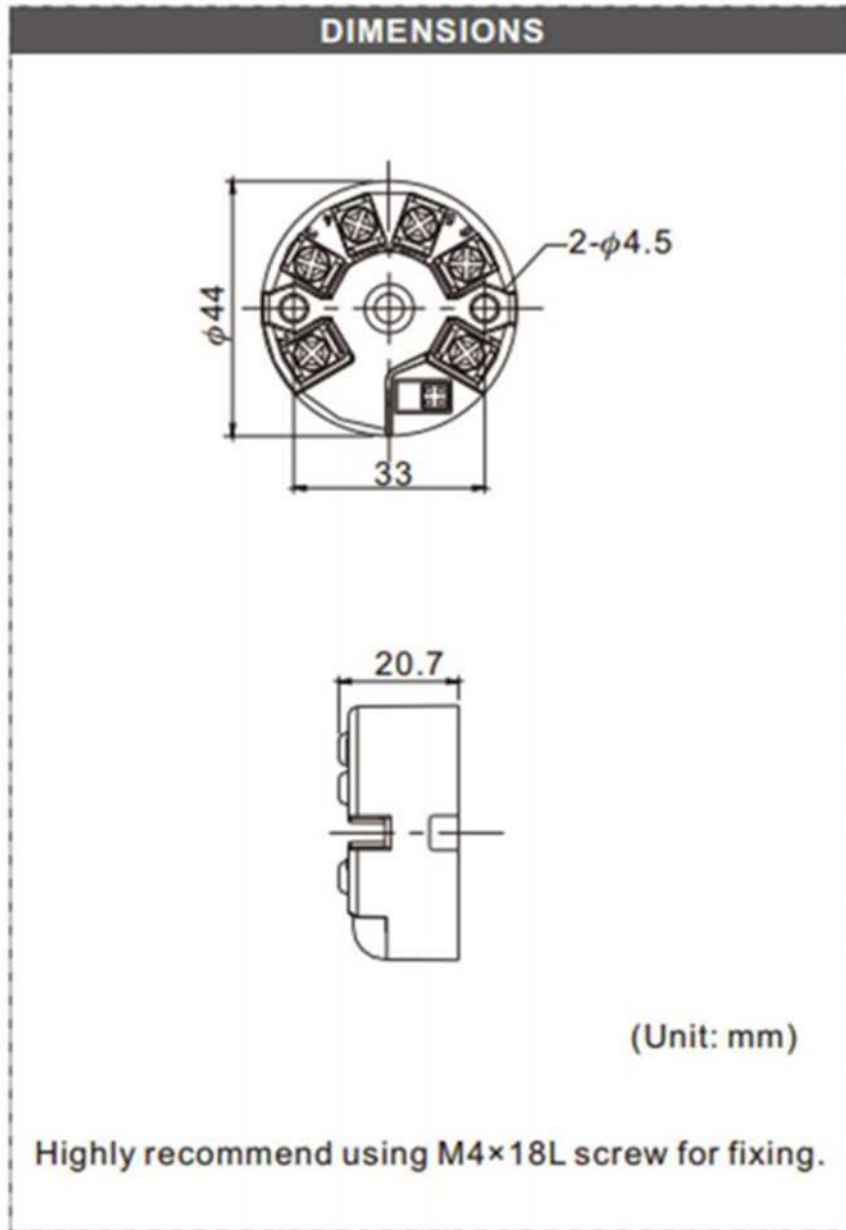
1. Make sure the screw terminals are properly tightened. If the screws drop out, it could cause fire or mechanical breakdown.
2. Don't use this product in explosive or flammable gas environment; due to risk of explosion.
3. Only use the relay within specified load rating. Failure to do so may reduce the life expectancy of the relay or it.
4. Don't disassemble, repair or modify the product without authorization, this may cause short circuit, fire or malfunction.
5. Avoid dropping metal fragments or lead wire scraps inside the product. This may cause short circuit, fire or malfunction.

Environmental Conditions

- a) Indoor use
- b) Altitude up to 2 000 m
- c) Temperature 5°C to 40°C
- d) Maximum relative humidity 80 % for temperatures up to 31°C decreasing linearly to 50 % relative humidity at 40 °C;
- e) Over voltages category II
- f) Pollution degree II.

SPECIFICATIONS

- Supply Voltage: Loop Power 18~32 Vdc
- DCV Input: 0~500 mV/0~1V/0~5V/0~10V/0~20V
- DCA Input: 0~20mA / 4~20mA
- Thermocouple Input: K / J / T / E / R / S / B / N
- RTD / Resistance Input: PT100 / 0~400Ω
- Analog Output: 4~20mA (Loop Power)
- Accuracy: 18bits
- Ambient Temperature: -20~60°C
- Communication: HART
- Galvanic Isolation: 1500 Vac
- Degree of Protection (IEC 60529): IP00
- Warm Up Time: 10 minutes



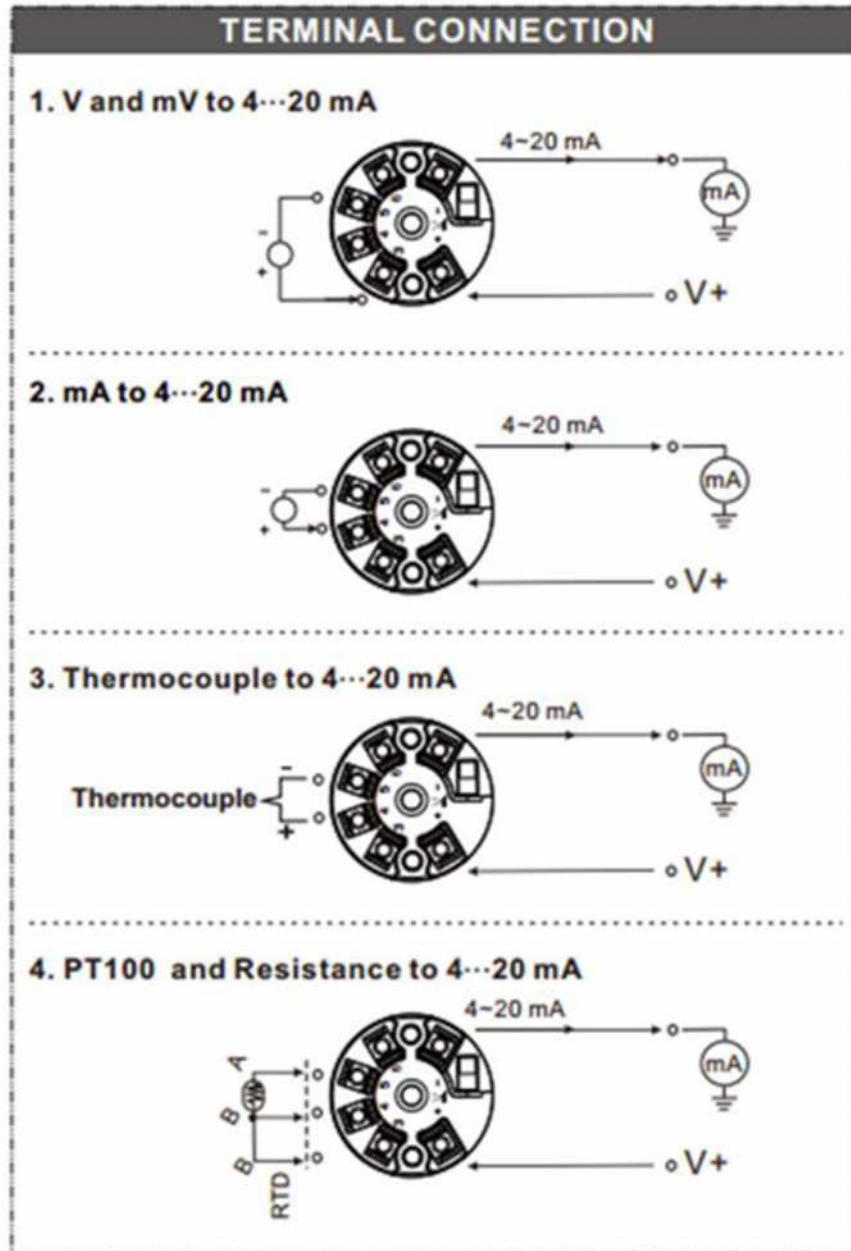
General values			
Input Type	Range	Accuracy	Temp.Coefficient
All Type	By Type	$\leq \pm 0.05\%$	$\leq \pm 100\text{ppm} / ^\circ\text{C}$

Basic values					
Input Type	Range	Min. Span	Accuracy*	Temperature coefficient (% / °C)	
Voltage	-10~100mV	2mV	$\leq \pm 0.01\text{mV}$	$\leq \pm 0.005\%$	
Thermocouple	B	250~1820°C	100°C	$\leq \pm 5.5^\circ\text{C}$	$\leq \pm 0.04\%$
	E	-200~1000°C	50°C	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.01\%$
	J	-210~1200°C	50°C	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.01\%$
	K	-200~1370°C	50°C	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.01\%$
	N	-200~1300°C	50°C	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.01\%$
	R	-50~1760°C	100°C	$\leq \pm 3^\circ\text{C}$	$\leq \pm 0.04\%$
	S	-50~1760°C	100°C	$\leq \pm 3^\circ\text{C}$	$\leq \pm 0.04\%$
	T	-200~400°C	40°C	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.01\%$
Resistance	0~400Ω	5Ω	$\leq \pm 0.04\Omega$	$\leq \pm 0.005\%$	
PT100	-200~850°C	10°C	$\leq \pm 0.5^\circ\text{C}$	$\leq \pm 0.005\%$	

Cold junction compensation : $\leq \pm 1^\circ\text{C}$
 ※Accuracy at 25°C

ORDERING INFORMATION									
TR1 □□-□□-□□□□-□									
Type	10---none isolation 20---isolation 1.5KV								
Display	0---none								
Communication	0---none 2---HART								
Input type	V : DC Voltage T : Thermocouple/RTD I : DC Current R : ohm								
Unit	0:°C 1:°F 9:Other								
Input range									
Output	0---4-20mA								

Input type	Unit	Input range		Input type	Unit	Input range			
V	0:V	01	DC Voltage	0~0.5V	T	0:°C	00	All Type BY Type	
		02	DC Voltage	0~1V			01	K Type	-200°C~1370°C
		03	DC Voltage	0~5V			11	K Type	-90°C~320°C
		04	DC Voltage	0~10V			02	J Type	-210°C~1200°C
		05	DC Voltage	0~20V			12	J Type	-90°C~320°C
I	0:mA	01	DC Current	0~20mA			03	T Type	-200°C~400°C
		02	DC Current	4~20mA			04	E Type	-200°C~1000°C
R	0:Ohm	01	Resistance	0~400Ohm			05	R Type	-50°C~1760°C
							06	S Type	-50°C~1760°C
							07	B Type	250°C~1820°C
							08	N Type	-200°C~1300°C
					09	PT100	-200°C~850°C		



TR CONVERTER PIN ASSIGNMENT			
Pin Number	Abbr.	Description	Schematic
1	+3.3DCV	3.3DCV	
2	GND	Ground	
3	BTX	BSL transmit	
4	BRX	BSL receive	
5	BTXEN	For firmware programmed	
6	DSPEN		
7	X	Disconnect	
8	X	Disconnect	

※FineTek provide RS232 to RS485 convertor and TR connector to go with software of configuration.