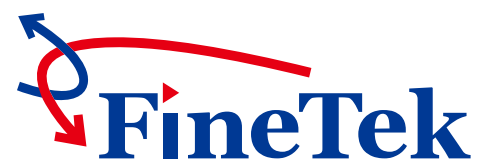




## Temperature Transmitter



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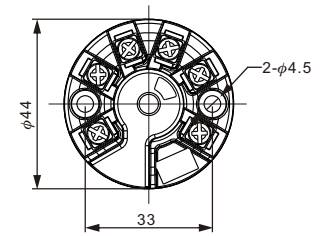
TYPE	TR110 Series	TR120 Series
	Non-Isolation	Isolation
Input : RTD 、 TC 、 Rohm 、 mV 、 Linear Current 、 Linear Voltage		

**Function Summary:**

Features:	TR110 Series	TR120 Series
Power Supply(Vdc)	18~32V(Loop-Powered)	18~32V(Loop-Powered)
Ambient temperature range(°C)	-20~60	-20~60
Isolation	None	1500Vac
Channels	1	1
CJC Accuracy(°C)	$\leq \pm 1$ (Internal)	$\leq \pm 1$ (Internal)
<b>Input:</b>		
PT100 Span /min. span(°C)	-200~850 / 10	-200~850 / 10
Rohm Span /min. Span( $\Omega$ )	0~400 / 5	0~400 / 5
TC types	B, E, J, K, N, R, S, T	B, E, J, K, N, R, S, T
Linear Current, signal range	0~20mA, 4~20mA	0~20mA, 4~20mA
Linear Voltage, signal range	0~0.5V, 0~1V, 0~5V, 0~10V, 0~20V	0~0.5V, 0~1V, 0~5V, 0~10V, 0~20V
<b>Output:</b>		
2-wire output	4~20mA	4~20mA

**Technical Summary:**

	Basic Accuracy	Temperature Coefficient
PT100	$\leq \pm 0.5^\circ\text{C}$	$\leq \pm 0.005\% / ^\circ\text{C}$
Rohm	$\leq \pm 0.04\Omega$	$\leq \pm 0.005\% / ^\circ\text{C}$
TC type: E, J, K, N, T	$\leq \pm 2^\circ\text{C}$	$\leq \pm 0.01\% / ^\circ\text{C}$
TC type: B	$\leq \pm 5.5^\circ\text{C}$	$\leq \pm 0.04\% / ^\circ\text{C}$
TC type: R, S	$\leq \pm 3^\circ\text{C}$	$\leq \pm 0.04\% / ^\circ\text{C}$
Voltage	$\leq \pm 0.01\text{mV}$	$\leq \pm 0.005\% / ^\circ\text{C}$

**Dimensions**


(Unit: mm)

**Ordering Information**

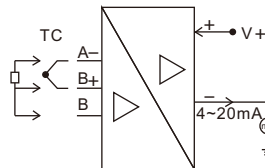
TR1 □ □ - 0 □ - □ □ □ □ - □

Type	10: none isolation 20: isolation 1.5KV
Communication	0: none
Input type	V : DC Voltage      T : Thermocouple/RTD I : DC Current      R : ohm
Unit	0: °C    1: °F    9: Other
Input range	on right
Output	0: 4-20mA

Input type	Unit	Input range
V	V	01 DC Voltage 0~0.5V
		02 DC Voltage 0~1V
		03 DC Voltage 0~5V
		04 DC Voltage 0~10V
		05 DC Voltage 0~20V
I	mA	01 DC Current 0~20mA
		02 DC Current 4~20mA
R	Ohm	01 Resistance 0~400Ohm

Input type	Unit	Input range
T	°C	00 All Type BY Type
		01 K Type -200°C~1370°C
		11 K Type -90°C~320°C
		02 J Type -210°C~1200°C
		12 J Type -90°C~320°C
		03 T Type -200°C~400°C
		04 E Type -200°C~1000°C
		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

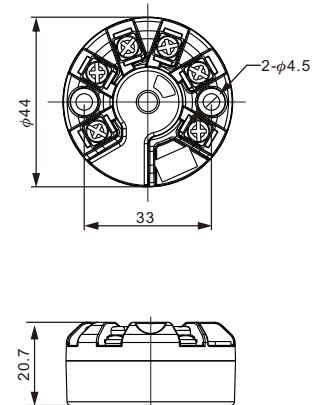

**TYPE**
**TR160 Series**
**Economical type**

 Input : RTD, TC, Rohm,  
mV, Linear Current,  
Linear Voltage

**Function Summary:**
**Features:**

Power Supply(Vdc)	18~36V
Ambient temperature range(°C)	-40~85
Isolation	None
Channels	1
CJC Accuracy(°C)	≤± 1(Internal)
<b>Input:</b>	
PT100 Span /min. span(°C)	-200~850 / 10
Rohm Span /min. Span(Ω)	0~400 / 5
TC types	B, E, J, K, N, R, S, T
Linear Current, signal range	0~20mA, 4~20mA
Linear Voltage, signal range	0~0.5V, 0~1V, 0~5V, 0~10V, 0~20V
<b>Output:</b>	
2-wire output	4~20mA/20~4mA

**Technical Summary:**

	Basic Accuracy	
PT100	≤± 0.5°C	≤± 0.005°C
Rohm	≤± 0.4Ω	≤± 0.005°C
TC type: E, J, K, N, T	≤± 4°C	≤± 0.04°C
TC type: B	≤± 3°C	≤± 0.01°C
TC type: R, S	≤± 3°C	≤± 0.04°C
TC type: T	≤± 2°C	≤± 0.01°C
Voltage	≤± 0.1mV	≤± 0.005°C

**Dimensions**


(Unit: mm)

**Ordering Information**
**TR160-00-□□□□-□**

<b>Input</b>	V---voltage I---current	T---thermocouple/RTD R---ohm	▲	▲	▲	▲
<b>Display unit</b>	0---°C 1---°F	9---Other	▲	▲	▲	▲
<b>Input</b>	See the table					
<b>Range</b>	0---4-20mA 1---20-4mA		▲	▲	▲	▲

Input type	Unit	Input range		
V	V	01	DC Voltage	0~0.5V
		02	DC Voltage	0~1V
		03	DC Voltage	0~5V
		04	DC Voltage	0~10V
		05	DC Voltage	0~20V
I	mA	01	DC Current	0~20mA
		02	DC Current	4~20mA
R	Ohm	01	Resistance	0~400Ohm

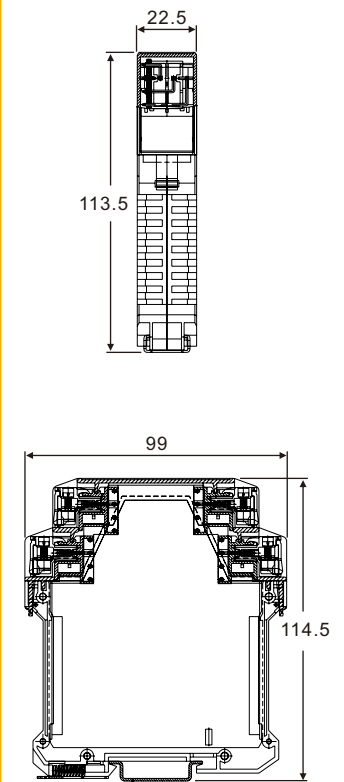
Input type	Unit	Input range		
T	°C	00	All Type	BY Type
		01	K Type	-200°C~1370°C
		11	K Type	-90°C~320°C
		02	J Type	-210°C~1200°C
		12	J Type	-90°C~320°C
		03	T Type	-200°C~400°C
		04	E Type	-200°C~1000°C
		05	R Type	-50°C~1760°C
		06	S Type	-50°C~1760°C
		07	B Type	250°C~1820°C
08	N Type	-200°C~1300°C		
09	PT100	-200°C~850°C		



TYPE	TR130/131 Series		TR140/141 Series	
	DIN Rail Non-Isolation		DIN Rail Isolation	
	1 Channel	2 Channels	1 Channel	2 Channels
Input : RTD · TC · Rohm · mV · Linear Current · Linear Voltage				

### Dimensions

TR130/ 131/ 140/ 141 Series



(Unit: mm)

### Function Summary:

Features:	TR130/131 Series	TR140/141 Series
Power Supply(Vdc)	18~32V(Loop-Powered)	18~32V(Loop-Powered)
Ambient temperature range(°C)	-20~60	-20~60
Isolation	None	1500Vac
Channels	1 or 2	1 or 2
CJC Accuracy(°C)	≤± 1(Internal)	≤± 1(Internal)
<b>Input:</b>		
PT100 Span /min. span(°C)	-200~850 / 10	-200~850 / 10
Rohm Span /min. Span(Ω)	0~400 / 5	0~400 / 5
TC types	B, E, J, K, N, R, S, T	B, E, J, K, N, R, S, T
Linear Current, signal range	0~20mA, 4~20mA	0~20mA, 4~20mA
Linear Voltage, signal range	0~0.5V, 0~1V, 0~5V, 0~10V, 0~20V	0~0.5V, 0~1V, 0~5V, 0~10V, 0~20V
<b>Output:</b>		
2-wire output	4~20mA	4~20mA

### Technical Summary:

	Basic Accuracy	Temperature Coefficient
PT100	≤± 0.5°C	≤± 0.005% / °C
Rohm	≤± 0.04Ω	≤± 0.005% / °C
TC type: E, J, K, N, T	≤± 2°C	≤± 0.01% / °C
TC type: B	≤± 5.5°C	≤± 0.04% / °C
TC type: R, S	≤± 3°C	≤± 0.04% / °C
Voltage	≤± 0.01mV	≤± 0.005% / °C

### Ordering Information

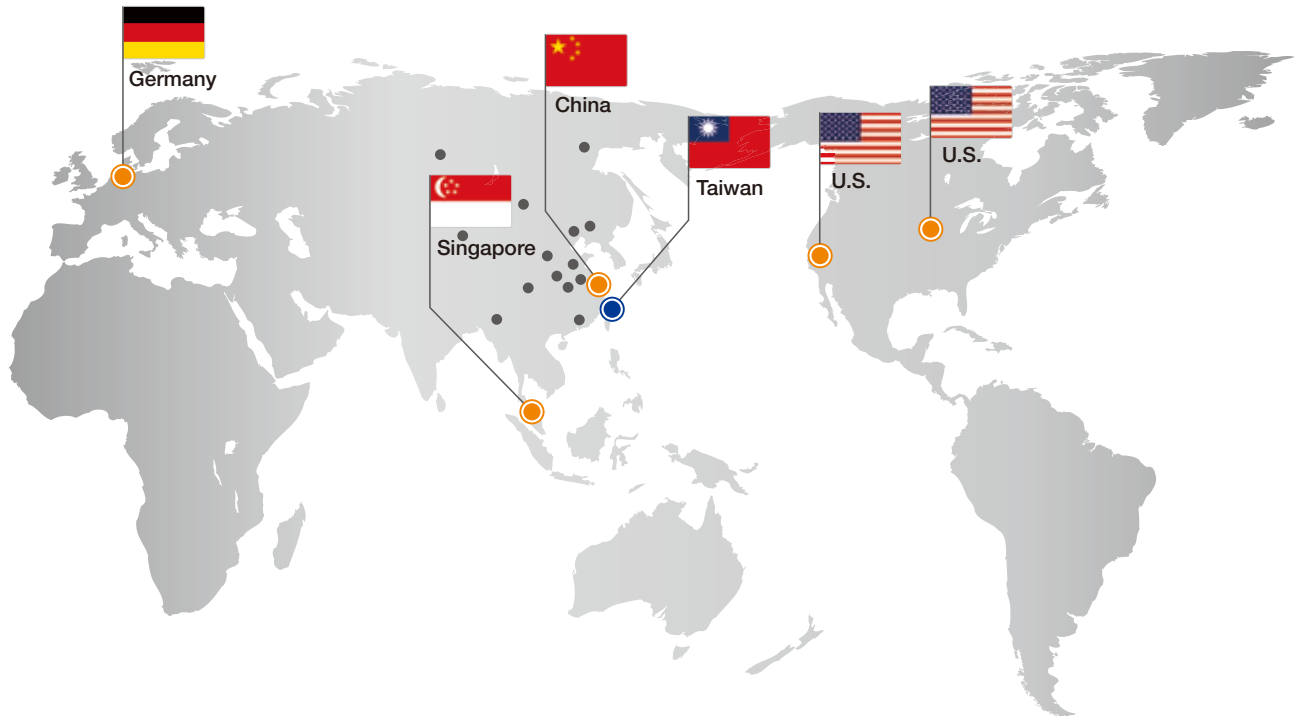
TR1□□-0□-□□□□-□

Type	30: DIN Rail none isolation (1 Channel) 31: DIN Rail none isolation (2 Channels) 40: DIN Rail isolation 1.5KV (1 Channel) 41: DIN Rail isolation 1.5KV (2 Channels)
Communication	0: none
Input type	V : DC Voltage      T : Thermocouple/RTD I : DC Current      R : ohm
Unit	0: °C    1: °F    9: Other
Input range	on right
Output	0: 4-20mA

Input type	Unit	Input range
V	V	01 DC Voltage 0~0.5V
		02 DC Voltage 0~1V
		03 DC Voltage 0~5V
		04 DC Voltage 0~10V
		05 DC Voltage 0~20V
I	mA	01 DC Current 0~20mA
		02 DC Current 4~20mA
R	Ohm	01 Resistance 0~400Ohm

Input type	Unit	Input range
T	°C	00 All Type BY Type
		01 K Type -200°C~1370°C
		11 K Type -90°C~320°C
		02 J Type -210°C~1200°C
		12 J Type -90°C~320°C
		03 T Type -200°C~400°C
		04 E Type -200°C~1000°C
		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		

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