

**§ BOX TRANSDUCER §**      **SENSOR TRANSDUCER**  
**THERMOELECTRIC TEMPERATURE TRANSDUCER**

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HTT2-82A/ HTT2-83A (DC110V power source)

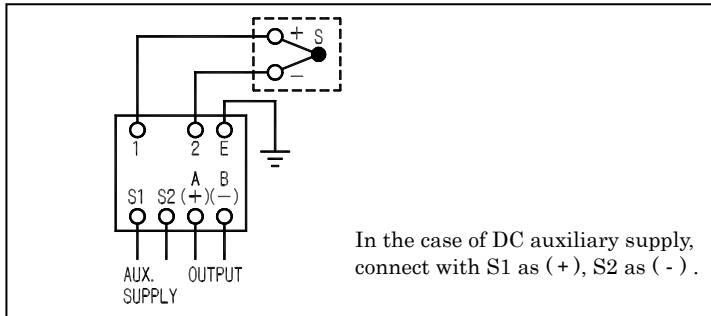
**Use**

With thermal electromotive force of various thermocouples according to JIS as input, convert temperature with insulation into DC signal in proportion to temperature with insulation.

**Features**

1. Withstand voltage 2, 000V AC (between input/output/auxiliary supply/earth).
2. Impulse withstand voltage 5kV 1.2/50µs (electric circuit/earth), positive/ negative polarity 3 times each is guaranteed.
3. With output line surge protection (2, 000A, ±8/20µs), can transmit an output directly to a distant place.
4. Constant voltage/current output.

**Connection diagram**



**HTT2-82A**  
 (120 × 56 × 130mm/800g)

**Specification and performance**

Kind of thermocouple	Standard input range	Input	Output (load resistance)	Auxiliary supply	Common specification
B	7~9	1: 0-200	1: DC0-100mV ( 200 )	1: AC100V±15%, 50/60Hz	Tolerance: 0.5%  Response time: 1sec. ( ± 1%)  Consumption VA: AC power source 3.5VA DC power source 3.5W DC 110V            4.5W Weight: 800g
R	7~9	2: 0-300	2: DC0-1V ( 200 )	2: AC110V±15%, 50/60Hz	
S	7~9	3: 0-400	3: DC0-5V ( 1k )	3: AC200V±15%, 50/60Hz	
		4: 0-500	4: DC 0-10V ( 2k )	4: AC220V±15%, 50/60Hz	
K	2~8	5: 0-600	5: DC1-5V ( 1k )	5: DC24V±15%	
		6: 0-800	A: DC0-1mA ( 10k )	6: DC48V±15%	
E	1~5	7: 0-1,000	B: DC0-5mA ( 2k )	7: DC110V (88-143V)	
		8: 0-1,200	C: DC0-10mA ( 1k )	0: other than those above	
J	1~5	9: 0-1,400	D: DC0-16mA ( 600 )		
T	1~2	0: other than those above	E: DC1-5mA ( 2k )		
			F: DC4-20mA ( 500 )		
			0: other than those above		

Open of current output: even if the current output terminal is used in a state of regular open, there is no problem.

Also, a voltage of approx. 15V occurs on the output terminal.

DC 110V power: Type is HTT2-83A.

Have a consultation with us for N thermocouple.

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**Built-in linearizer**

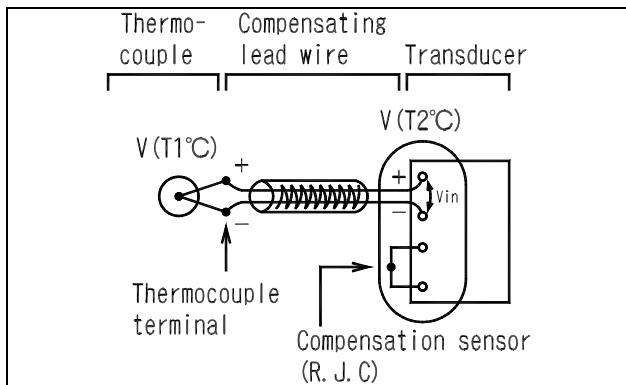
Thermal electromotive force of a thermocouple is not proportional to temperature.  
 The linearizer converts thermal electromotive force into an output proportional to temperature.

**Built-in burnout**

The device detects disconnection of a thermocouple and does scale-out of output to positive (+) side.  
 Scale-out to negative side is also manufacturable if specified.

**Built-in cold junction compensation**

In principle, a thermocouple generates a thermal electromotive force equivalent to  $V(T1) - V(T2)$  as  $V_{in}$ .  
 Compensating sensor compensates a thermal electromotive force equivalent to  $T2$ .



**Compensating wire**

A compensating wire compensates temperature difference between thermocouple terminals and transducer terminals. Because color (material) of compensating wire varies according to thermocouple type, choose a compensating wire in accordance with thermocouple. Match positive and negative polarities when connecting.

**External resistance range**

An External resistance value is the resistance value of a reciprocating circuit which consists of thermocouple connected to the transducer, compensating wire, connecting wires and so on.  
 Use the product within a reciprocal circuit resistance less than or equal to  $25\Omega$ .

**Purchase specifications**

