

## DESCRIPTION

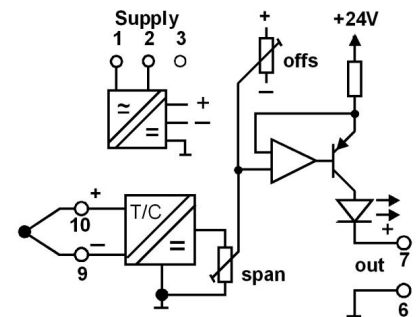
The BTCT126 is a 4-wire isolating temperature transmitter designed for any type of thermocouple input and an isolated process signal output. All transmitters feature electronic cold junction compensation, matched to the type of thermocouple used. Upscale or downscale burn-out is optional. Final calibration is trimmed using the front accessible 'offs' and 'span' 15-turn trim adjustments. Zero suppression or elevation is available up to 300% of range. Output signal follows thermocouple curve and is indicated by the LED on front, which gives a clear indication of module function, presence of signal, and output loop closed (current outputs only). Thermocouple signal is isolated from output signal. RF and power transient protection is standard as it is with all BASI modules. Various power supply choices are available varying from 240Vac down to 8Vdc, all provide power isolation.



## General Specifications

Size:	52 W x 70 H x 110 D (mm).
Mounting:	DIN-Rail, gear plate.
Housing material:	ABS.
Termination:	Screw terminals on front.
Weight:	0.300 kg.
Protection class:	IP40.
T/C input spans:	4mV up to 80mV.
Input impedance:	>1M $\Omega$ .
Calibration accuracy:	<0.5% of range.
Front 'OFFS' adjust:	$\pm$ 20% typical
Front 'SPAN' adjust:	$\pm$ 20% typical
Repeatability:	<0.5% of range.
Cold junction comp. error:	0.02 per $^{\circ}$ C C/J change over ambient range 0 - 60 $^{\circ}$ C with input range 100 $^{\circ}$ C.
Ambient operating range:	-10...+60 $^{\circ}$ C
Offset:	300% of range
Output loop drive:	20mA into 0 - 900 $\Omega$ 50mA into 0 - 360 $\Omega$
Output load change effect:	<0.2% dup to max. load
Input/output isolation:	>2kV rms.
Power requirements:	3W.
Power supply isolation:	2kV rms.
Electromagnetic compatibility:	Complies with CE

## Block Diagram



For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

**TYPE NO. DESIGNATION****Power Supply:**

- 1 = 90-280Vac 50/60Hz (65-280Vdc). \*) 6 = 8 - 60Vdc.  
 \*) 3 = 16-48Vac 50/60Hz (10-60Vdc) \*) 9 = Other (Specify).

**Input:**

- 01 = Thermocouple Type J (FeCon: 80°C up to 1200°C range).  
 02 = Thermocouple Type T (CuCon: 100°C up to 400°C range).  
 03 = Thermocouple Type K (NiCr/Ni: 100°C up to 1300°C range).  
 04 = Thermocouple Type R (Pt13%Rh/Pt: 450°C up to 1700°C range).  
 05 = Thermocouple Type N (Nicrosil/Nisil: 150°C up to 1300°C range).  
 06 = Thermocouple Type S (Pt10%Rh/Pt: 450°C up to 1700°C range).  
 07 = Thermocouple Type E (ChrCon: 65°C up to 1000°C range).  
 \*) 09 = Other (Specify).

**Output:**

- 4 = Link selectable specify range from table below (4 – 20mA is default setting).  
 \*) 5 = 0 - 50mA (360Ω max).  
 \*) 6 = 10 - 50mA (360Ω max).  
 \*) 9 = Other specify.

**Action:**

- 1 = Direct. 2 = Reverse.

**TC-Burnout Option:**

- 0 = Not defined.  
 1 = Upscale.  
 2 = Downscale.

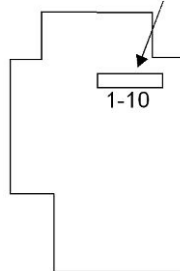
**Options:**

- 0 = None.  
 \*) 9 = Other (Specify).

\*) = Price Extra.

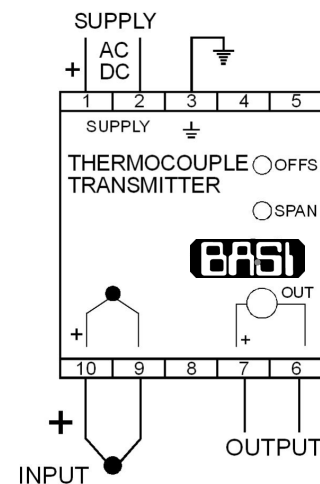
**Output Range selection**

- 1) Disconnect power to unit.
- 2) Remove terminal covers.
- 3) Un-clip housing lid and withdraw unit from housing.
- 4) Set the coding plugs as required.
- 5) Reassemble unit and connect power.
- 6) Adjust SPAN and OFFS pots to recalibrate.
- 7) Change the label information to the new input/output values.

**SW2 OUTPUTS****Output Selection – SW2**

Factory default us 4-20mA

Output	1	2	3	4	5	6	7	8	9	10
4-20mA	X	X								
0-20mA					X					
0-10mA			X							
0-1mA				X						
0-1V					X				X	
0-2V					X					X
0-5V					X			X		
1-5V	X	X						X		
0-10V					X		X			

**Connection**

In the interest of development and improvement, BASI reserve the right to amend, without notice, details contained in this publication. BASI will accept no legal liability for any errors, omissions or amendments.