

THNF-A

DIGITAL THERMOCOUPLE CONNECTOR CONDITIONER
1kHz Sampling Frequency, 0-5V analog and serial outputs

Ref:
SN: Software version : v

Texsys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

Range	-100 min, 1800 max	°C
Type	B, E, J, K, N, R, S, T	
Sampling frequency	1	kHz
Cold junction error	± 0.25	°C
Analog Output	Accuracy	± 0.25 %FS
	Drift vs Ambient Temperature	± 0.25 %FS
	Range	0-5 V
	Impedance	100 Ω
Digital Output*	Accuracy	± 0.5 °C
	Resolution	0.1 °C
	Frequency	50 Hz
	Serial Link*	ASCII, 115200 Bauds
Supply Voltage	6 to 25	V
Supply Current	< 10	mA
Calibrator	Calog Temperature	
Dimension "A" type	38.8x18.7x10	mm
Material "A" type	Aluminum	
Weight	tbd	g
Protection	IP53	
Vibration test	20Gpp5'	
Shock	500	G
Operating Temp	-40 to +125	°C
Storage Temp	-40 to + 125	°C

* Only with Texense USB-Connect 5V

Ordering ref:

THNF-A-	Type	Range
	K	-20+200
	J	-40+400
	T	0+1800

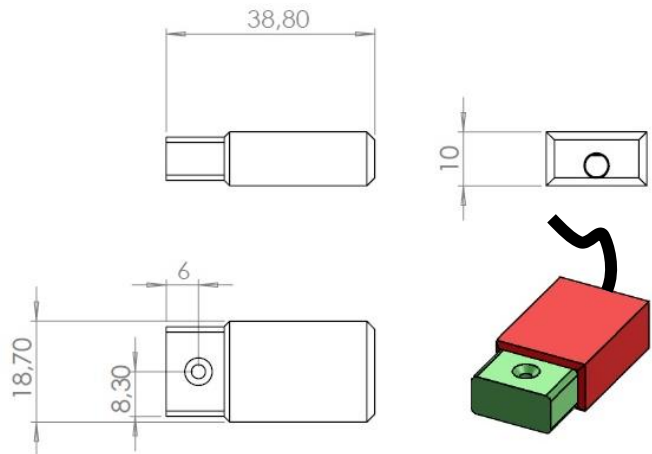
Ex: THNF-A-K-50+250 → type K, -50 to +250°C

Conditioner Characteristics	
Type	
Range	to °C
Analog Offset	mV
Analog Sensitivity	mV/°C
Digital Output	

Sensor Readings	
	mV at °C temperature probe
	mV at °C temperature probe

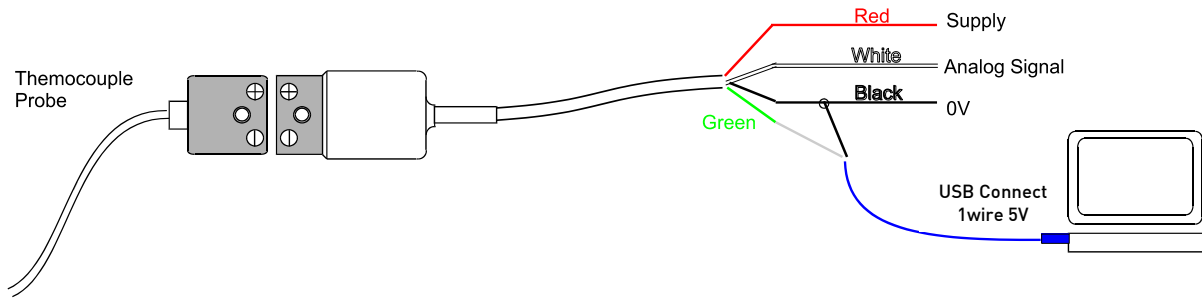
Cable	
Type:	4x26AWG FEP tinned copper braided (250V 200°C)
Length:	mm Tubing:
Connector:	

Pinout		
Colour	Function	Pin
Red	Supply	
Black	Ground 0V	
White	Analog Output	
Green	Digital Output	
Braid		



Digital Output

Connections



Drivers

It is necessary to download a VCP driver (Virtual Com Port) FTR232R to convert the USB port in Serial COM Port at the following address: www.ftdichip.com/Drivers/VCP.htm
More info @ www.ftdichip.com/Documents/InstallGuides.htm

Software

Use HyperTerminal (for Windows Vista and 7: www.hilgraeve.com/htpe/download.html) or available software for COM port management.

Settings

115200 bauds, 8 bits data, no parity, 1 bit stop, no flow control, recommended font Courier New

Operating Modes

At power up,

- if Digital Output is disable, the sensor sends just the following header:

```
THNF-A v1.00 SN12345678 K-40+150  
Serial Output DISABLE 'W'
```

- if Digital Output is enable, the sensor sends directly the digital value, with this following format:

```
01456  
01456  
01457  
...
```

Serial Output Format

0x0D (carriage return) + 0x0A (new line) + 5 ASCII char for the temperature in tenths of degree

E.g.: Temperature of 145.6°

```
01456  
01456  
01456  
01456  
...
```

Temperature of -5.2°

```
-0052  
-0052  
-0052  
-0052  
...
```

Warning

The negative pole of the thermocouple probe is connected to 0V. To avoid ground loop problems, isolated probes are recommended.

For complete information, contact us at info@texense.com