



THN DIGITAL THERMOCOUPLE CONDITIONER

Main Characteristics

- Compact and easy to install
- Works with any thermocouple type K, J, T... terminated with a miniature male connector
- Standard Range from -100 to 1250°C
- Supply 5 to 30V
- Both linear Output signals :
 - Digital
 - Analog 0 to 5V or 0 to 10V
- THN withstands -40 to +125 °C ambient temperature allowing a connection close to the probe itself.
- Non linearity and Hysteresis
Max error 0.5°C

Types and ranges

Thermocouple type : K, J, T, ...

Ranges : -50 to 200°C, -100 to +400°C, 0 to 1250°C

Any other range may be achieved for improved resolution
Cold junction compensation from -40°C to +125°C ambient temperature

Specifications

Supply voltage: 5 to 16 V or 12 to 33V

Supply current: 3mA

Sampling frequency: 5HZ

Digital output :

5HZ serial data 9600 Bauds ASCII format

Max error including nonlinearity and hysteresis: 0.5°C

Max error for ambient temperature : 0.5°C

Analog output :

0-5V if supply is 5 to 16V,

0-10V if supply is 12 to 33V

Additional error including nonlinearity and hysteresis: 0.5°C

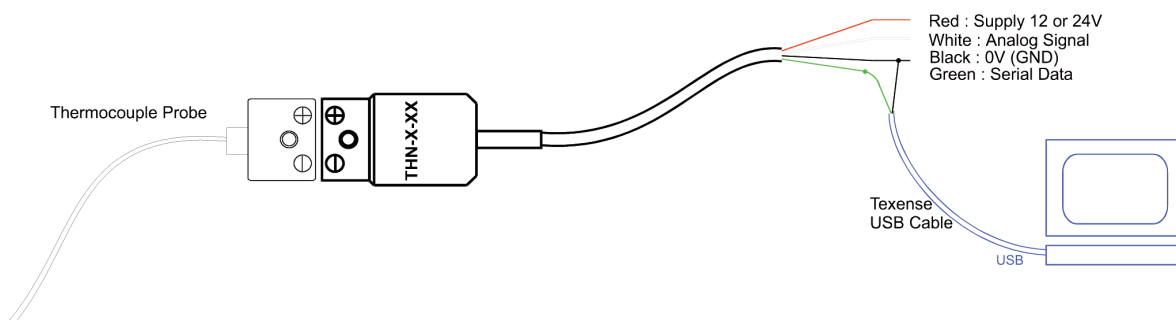
Offset drift with temperature : < 0.25%

Operating Temperature: -40° to 125°C

Storage Temperature: -40° to 125°C

Protection : IP53

Connection





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Serial Data

Drivers

Download a VCP (Virtual Com Port) driver FT232R to emulate a serial port with USB input. This driver must match the Windows version.

Downloading address:

www.ftdichip.com/Drivers/VCP.htm

Transfer the CDM.zip file and store it in a temporary repertory, then unzip it in a local repertory.

Plug the Texense USB Cable and wait for the automatic installation window.

Choose to install the driver : choose 'no' for internet option, then give the browser the name of your local repertory (with unzipped files)

Attention, 2 successive installations are needed, with the same procedure.

More info @ www.ftdichip.com/Documents/InstallGuides.htm

Data on Hyperterminal

Use HyperTerminal from Windows (up to XP*)
9600 bauds, 8 data bits, no parity, 1 bit stop, no control, recommended font: Courier New)

At power up of the THN :

THN 3.6 Texys.fr *software version*
T -50°C +200°C *temperature range*
S/N : 09011234 *serial number*
Table T - 50°C / + 200°C

Then, every 200msec :

Thermocouple Temperature **Tc** and Ambient Temperature **TA**

30 Ascii characters + Line Feed + Return

Tc = + 159.2°C **TA** = + 22.6°C

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...

* For Windows Vista, HyperTerminal is available at:
www.hilgraeve.com/hpte/download.html.

Analog Output Signal

Supply	Range				Sensitivity
12V	-50 to +200°C	0V at -50°C	1V at 0°C	5V at +200°C	20mV/°C
	-100 to +400°C	0V at -100°C	1V at 0°C	5V at +400°C	10mV/°C
	0 to +1250°C	0V at 0°C	1V at 250°C	5V at +1250°C	4mV/°C
24V	-50 to +200°C	0V at -50°C	2V at 0°C	10V at +200°C	40mV/°C
	-100 to +400°C	0V at -100°C	2V at 0°C	10V at +400°C	20mV/°C
	0 to +1250°C	0V at 0°C	2V at 250°C	10V at +1250°C	8mV/°C

Ordering Information

THN-t-r-s-o-h

t = type K,J,T ...

r = range : 200, 400, 1250 ...

s = supply : 12 (5 to 16 V) or
24 (15 to 33 V)

o = output : 5 or 10
(if different from standard)

h = housing :

P for plastics

A for aluminium

Default values

o = 5 if supply is 12V

o = 10 if supply is 24V

h = P (plastics)

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