

THNR4x

4 CHANNELS INSULATED DIGITAL THERMOCOUPLE CONDITIONER

Texense sensors are designed for data logging. Should the users want to include this sensor in a closed loop system, they must undertake total responsibility from doing so.

Range	-100 min, 1370 max	°C
Type	K	
Sampling frequency per channel	100	Hz
Integration Time	80 to 1280	ms
Max output frequency	10	Hz
Sampling error	0.2	%FS max
Cold junction error	±1	°C
CAN bus	2.0A or B	
CAN bus termination	R=120Ω, Switchable via CAN Bus	
Digital Output	Data Format	2 bytes per cell (signed int)
	Resolution	0.1 %/bit
	Accuracy	±1 °C for FS≤400°C or 0.25%FS for FS>400°C
Supply Voltage	6 to 36	V
Supply Current	15	mA
Calibrator	Fluke 714B or 753	
Dimension	43x40x23 for mini 35x35x17 for micro	mm
Material	Aluminum	
Weight	≤100	g
Protection	IP53	
Insulation @50V	50	MΩ
Vibration test	20Gpp5'	
Shock	500	G
Operating Temp	-40 to +125	°C
Storage Temp	-40 to + 125	°C

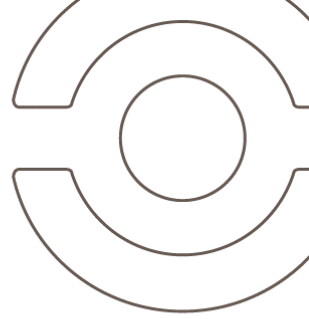
Cable		
Type: 5x26AWG FEP tinned copper braided (250V 200°C) Length: 1000mm Tubing: Connector:		
Color	Function	Pin
Red	Supply	-
Black	Ground 0V	-
Green	CAN High	-
White	CAN Low	-
Yellow	Do Not Connect	-
Braid	Not Connected	

Thermocouple connector
Mini version: Mini connector female Type K on conditioner Mating not supplied
Micro version: Micro connector female Type K on conditioner 4 mating connectors male supplied with the conditioner Ref: 431-11-01

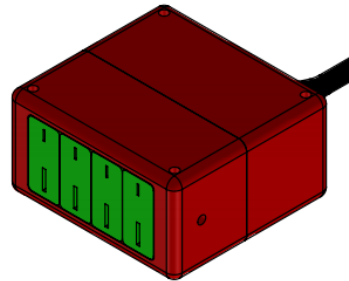
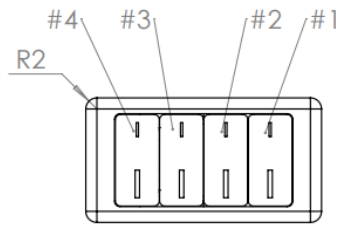
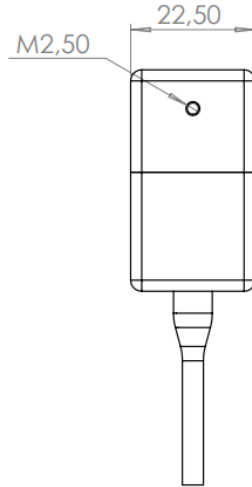
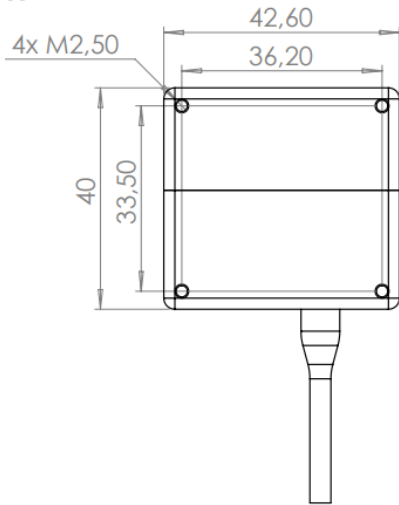
Ordering ref: THNR4x – Type/Range – Color Standard – Connector

K-100+400 : K type -100°C to +400°C K-100+800 : K type -100°C to +800°C K-100+1300 : K type -100°C to +1300°C K-40+1370 : K type -40°C to +1370°C K0+1000 : K type 0°C to 1000°C K0+1250 : K type 0°C to 1250°C	IEC : IEC standard ANSI : ANSI standard MICRO : Micro connector (IEC only) MINI : Mini connector
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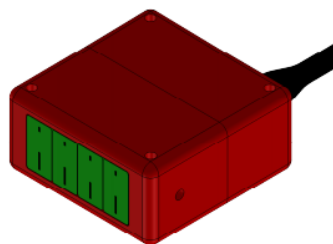
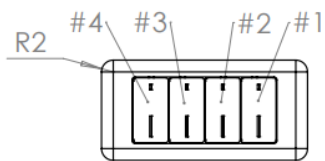
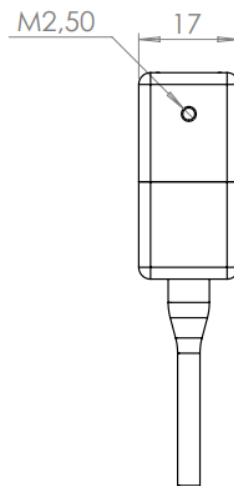
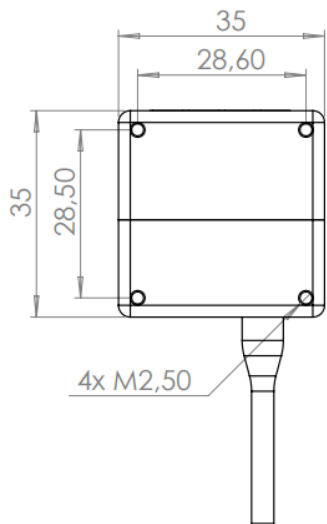
ex: THNR4x-K-100+400-IEC-MINI

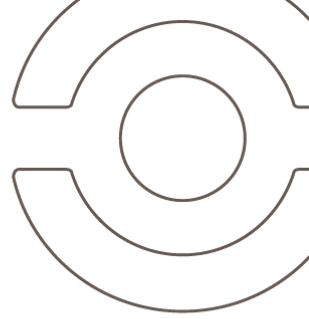


Mini version



Micro version





CAN Data output

- Resolution: 0.1°/bit
- 4 thermocouple temperatures:

Tx1 ID 0x3F0	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB	Byte 4 MSB	Byte 5 LSB	Byte 6 MSB	Byte 7 LSB
	Temperature #1		Temperature #2		Temperature #3		Temperature #4	

- 2 ambient temperatures (Tx2 frame enable = 1):

Tx2 ID 0x3F4	Byte 0 MSB	Byte 1 LSB	Byte 2 MSB	Byte 3 LSB
	Ambient #1		Ambient #2	

Changing parameters

CAN parameters:

Address	Parameter	Raw values	values	Comments											
0x00	Baudrate	0x00	CAN2.0A 1Mbps	Default											
		0x01	CAN2.0A 500 Kbps												
		0x02	CAN2.0A 250 Kbps												
		0x03	CAN2.0A 125 Kbps												
		0x10	CAN2.0B 1Mbps												
		0x11	CAN2.0B 500 Kbps												
		0x12	CAN2.0B 250 Kbps												
0x01	Emission frequency	0x00	Rx frame trig	Triggering mode - 100Hz max.											
		0x01	1 Hz												
		0x02	10 Hz												
0x02	RxTrig frame ID	if CAN2.0A: 0x1 to 0x7F0		MSB											
0x03		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB											
0x04	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7F0		MSB											
0x05		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB											
0x06	Tx2 frame ID	if CAN2.0A: 0x1 to 0x7F0		MSB											
0x07		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB											
0x08	Don't care (may be changed without consequence)														
0x09															
0x0A	Degree	0	Fahrenheit	Default											
		1	Celsius												
0x0B	CAN Bus Termination Resistor	0	Not connected	Default											
		1	Connected												
0x0C	Tx2 frame Enable	0	Disable	Default											
		1	Enable												
0x0D	Integration time #1	<table border="1"> <tr> <td>0x01</td> <td>80ms (8 samples)</td> <td rowspan="5">Default</td> </tr> <tr> <td>0x02</td> <td>160ms (16 samples)</td> </tr> <tr> <td>0x03</td> <td>320ms (32 samples)</td> </tr> <tr> <td>0x04</td> <td>640ms (64 samples)</td> </tr> <tr> <td>0x05</td> <td>1280ms (128 samples)</td> </tr> </table>			0x01	80ms (8 samples)	Default	0x02	160ms (16 samples)	0x03	320ms (32 samples)	0x04	640ms (64 samples)	0x05	1280ms (128 samples)
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0x0E	Integration time #2														
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0x10	Integration time #4														

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